TOARC 2011 Annual Report

Board of Directors

2011

Representing the Ontario Stone, Sand & Gravel Association (OSSGA)

Ken Lucyshyn - Chairman of the Board
Norm Flemington - Secretary/Treasurer
Bruce Semikowski
Greg Sweetnam

Representing the Conservation Council of Ontario (CCO)

Tony Jennings

Representing the Association of Municipalities of Ontario (AMO)

Ric McGee

Representing the Aggregate Industry at large (non OSSGA)

Gord Lavis

Representing the Ministry of Natural Resources (MNR) as an "Ex Officio Member"

Carrie Hayward

2012

Representing the Ontario Stone, Sand & Gravel Association (OSSGA)

Ken Lucyshyn - Chairman of the Board
Mark Zinn - Secretary/Treasurer
Bruce Semikowski
Greg Sweetnam

Representing the Conservation Council of Ontario (CCO)

Tony Jennings

Representing the Association of Municipalities of Ontario (AMO)

Ric McGee

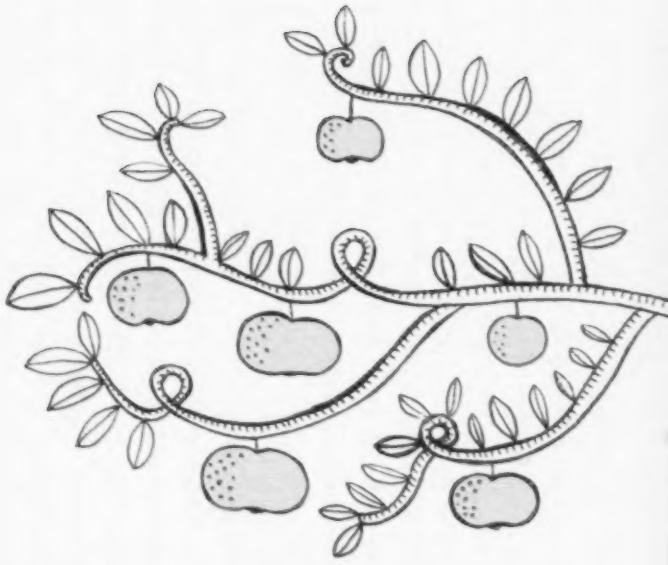
Representing the Aggregate Industry at large (non OSSGA)

Gord Lavis

Representing the Ministry of Natural Resources (MNR) as an "Ex Officio Member"

Don Mornigh

TOARC 2011 Annual Report



August 1, 2012
Honourable Michael Gravelle
Minister of Natural Resources
Suite 6630, 6th Floor, Whitney Block
99 Wellesley Street West
Toronto, Ontario M7A 1W3

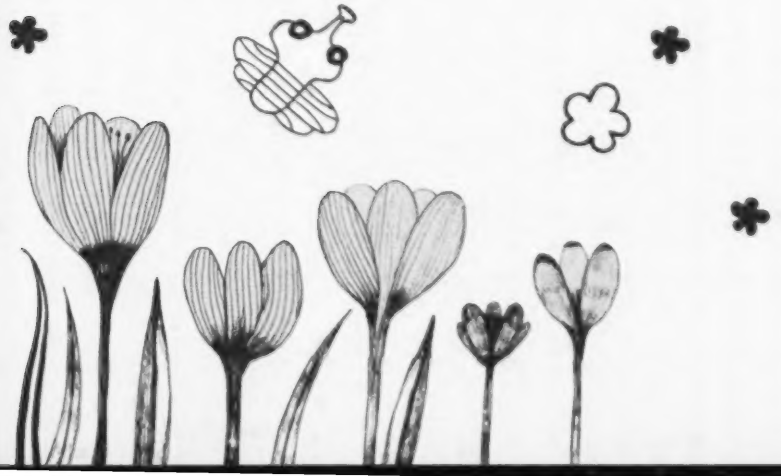
Minister Gravelle:

On behalf of the Board of Directors, I am pleased to submit the 2011 Annual Report of The Ontario Aggregate Resources Corporation.

This annual report includes audited financial statements for the Aggregate Resources Trust and The Ontario Aggregate Resources Corporation for the fiscal year ended December 31, 2011. Included within the financial statements for the Aggregate Resources Trust is a schedule of rehabilitation costs for projects completed by the Management of Abandoned Aggregate Properties (MAAP) program in 2011. The report also reviews a number of the many rehabilitation research and other initiatives being funded, as well as their application to creative rehabilitation solutions.

Yours truly,

Ken Lucyshyn
Chairman of the Board



2011 CHAIRMAN'S MESSAGE

Aggregate tonnage rebounded sharply in 2011 (compared to 2010) resulting in the collection and disbursement of aggregate resource fees that were up by $1.9 million over last year. Fees collected in 2011 totaled $20.4 million compared to $18.5 million in 2010. The fees disbursed in 2011 (based on 2010 production) were divided amongst designated recipients as follows:

	($Million)
Local municipalities	9.3
Counties & regions	2.3
MAAP program	.8
Province (from licence fees)	5.5
Province (royalties & permit fees)	2.5
Total	20.4

MAAP program staff continues to work through the original inventory files of abandoned pits (now often referred to as legacy pits) with the goal of identifying those sites most in need of rehabilitation and closing files where circumstances have changed to the point that rehabilitation is no longer necessary. Files may be closed for a number of reasons as indicated in the table below.

At the end of 2011, over 3,000 files were closed for the following reasons:

Developed	439
Licensed	153
No historical extraction	216
Naturalized (to create new habitat)	1,117
Rehabilitated (by owner)	326
Situated on Crown Land	17
Landowner Not Interested	407
Rehabilitated by MAAP/MNR	362
Total Files Closed:	3,037

The work of re-evaluating the oldest of the site files will continue until completed: a daunting task that could take another three field seasons. However, staff has conducted enough of these re-evaluations (approximately 3,300 of the original 6600 files) that we have enough well documented information to be able to predict with reasonable certainty how many of the sites not yet revisited, we will be able to close. That work tells us that there are approximately 3,000 remaining sites (legacy pits & quarries) in the Province that will require rehabilitation intervention of some sort. We look upon this challenge as an opportunity to create wetland, grassland and forest habitat as well as return some former extraction sites to agriculture.

With current site information in hand, we are now able to project how long it is going to take to complete this important work. While rehabilitating 3,000 sites seems much less of a challenge than the original 7,900 sites; with the existing resources allocated to this task, time to completion will extend beyond 125 years.

The board of directors (the Board) clearly does not believe this time frame is acceptable. The funding formula of 1/2 ¢ / tonne is unchanged since the Abandoned Pit & Quarry Rehabilitation Fund (operating as the MAAP program) was established in 1990. Twenty-two years of inflation has taken its toll! Accordingly, the Board has petitioned the Ministry of Natural Resources to review the funding formula for the MAAP program as part of the Aggregate Resources Act review. It is the Board's belief that funding, through the aggregate resources levy, should be increased to allow for the elimination of legacy pits within a twenty to twenty five year time frame.

I reported last year that the MAAP database was being converted from a paper based system to a digital, electronic system both from a security (back-up) point of view and to provide staff with another productivity tool to help them with the ongoing challenge of managing work on a large number of sites across a vast geographical area. I am pleased to report that the new eMAAP (trademark pending) digital database is now functional and available for staff to utilize in their daily work, including remote access. Notwithstanding an outdated funding model, productivity has increased from an average of 17 rehabilitation projects per year to over 30 projects in 2011. Further productivity increases however will be dependent on additional resources.

The final step in the creation of TOARC's totally digital database system will be the conversion of files on revoked sites. Programming is underway, file scanning will follow shortly and we have assigned the name eRevoke to this portion of the database.

The research component of the Aggregate Forum's initiative to introduce a new aggregate certification program in Ontario has been completed. The Trust was pleased to assist by funding the research work which was carried out by Deloitte & Touche LLP. The Aggregate Forum of Ontario (AFO) is currently amalgamating with a similar organization, Socially and Environmentally Responsible Aggregates (SERA). A new identity for the amalgamated group will be announced soon.

The Trust is currently funding three other research projects, one of which is just concluded. Establishing Alvar Mosses on Quarry Floors. Dr. Paul Richardson, along with research assistant Natalia Lecki, are into the second field season of their work on creating biodiversity offsets to mitigate the impacts from aggregate extraction and Brian Ohsowski (PhD candidate) is into the third season of trials designed to investigate the contribution various soil amendments have on the establishment of tallgrass prairie communities. Progress on each of these projects is detailed elsewhere in this report. As part of the recent (June 18-19, 2012) OSSGA annual rehabilitation tour, the MAAP group held a seminar/field trip to bring rehabilitation practitioners together to discuss and show the results of our current research efforts.

For the year ending 2011, the value of the Trust funds decreased from $17,057,642 to $16,559,474. TOARC's investment portfolio saw significant swings to its 'unrealized changes in fair value portion' of the portfolio (a decrease of $1,442,200), due in part to the difficult investment markets; while realized investment income showed an improvement of $331,224 over the prior year. Trustee's expenses were also down by $124,402 from the prior year as we took steps to rationalize staff levels and made cuts in our professional fee expenditures. On the operations side there were increased expenditures for rehabilitating revoked and abandon sites, and increases in research and education expenditures.

Respectfully submitted,

Ken Lucyshyn
Chairman of the Board

2011 MAAP

PROJECT SUMMARY

Project Number	Landowner	Location	Rehabilitation End Use	Area (ha)	Cost
10-17A	Ackerblade Pit	Haliburton County	Wetland	1.50	$ 16,930
10-17B	Ackerblade Pit	Haliburton County	Woodland	0.37	$ 7,347
10-18	Park-Kent Pit	Haliburton County	Meadow	0.23	$ 3,582
10-20A	Smith Pit	Haliburton County	Meadow	0.50	$ 8,945
10-20B	Smith Pit	Haliburton County	Meadow	0.14	$ 2,197
10-22	Beatrie Pit	Haliburton County	Meadow / Wetland	1.50	$ 16,063
10-23	Ewaschuk Pit	Haliburton County	Meadow	0.70	$ 6,852
10-25	Thomas Pit	Haliburton County	Horse Paddock	0.30	$ 5,168
11-01A	Swain Pit	Haliburton County	Woodland/ Meadow	0.13	$ 479
11-01B	Mulroy Pit	Haliburton County	Woodland/ Meadow	0.25	$ 958
11-01C	Bolton Pit	Haliburton County	Woodland/ Meadow	0.25	$ 958
11-01D	Wilson Pit	Haliburton County	Woodland/ Meadow	0.30	$ 958
11-01E	Thomas-Medhurst Pit	Haliburton County	Woodland/ Meadow	0.20	$ 718
11-02	Walter Pit	Peterborough County	Woodland	2.00	$ 2,296
11-03	Kentelbey Pit	Dufferin County	Woodland	0.06	$ 3,373
11-04	Bakker Quarry	Dufferin County	Fencing	0.50	$ 1,960
11-05A	Skjonsky Pit	Dufferin County	Agriculture	0.30	$ 8,112
11-05B	Alexander Pit	Dufferin County	Pasture	1.20	$ 11,553
11-05C	Corlett Pit	Dufferin County	Naturalized	1.38	$ 9,113
11-06A	Milley Pit	Dufferin County	Residential	0.06	$ 10,000
11-06B	Lindop Pit	Dufferin County	Naturalized	2.50	$ 10,627
11-06C	Rutledge Pit	Dufferin County	Woodland/ Native Meadow	0.26	$ 21,938
11-07A	Halbert Pit	Dufferin County	Tallgrass Prairie	6.20	$ 17,900
11-07B	McAuslane Pit	Dufferin County	Pasture	0.41	$ 13,058
11-07C	Fernandes Pit	Dufferin County	Agriculture	0.37	$ 18,605
11-07D	Rhodes Pit	Dufferin County	Pasture	0.30	$ 6,616
11-08	Myles Pit	Bruce County	Pasture	1.80	$ 2,175
11-09	Molto Pit	Huron County	Agriculture	2.00	$ 8,813
11-10A	Thompson Pit	Huron County	Agriculture	0.43	$ 4,678
11-10B	Scott Pit	Huron County	Agriculture	0.45	$ 4,488
11-10C	Siertsema Pit	Huron County	Meadow	0.35	$ 4,650
11-10D	Lapp Pit	Huron County	Agriculture	0.50	$ 6,840
11-11A	Shetler Pit	Huron County	Agriculture	1.10	$ 12,788
11-11B	Hallman Pit	Huron County	Pasture	0.10	$ 2,193
11-12A	Murray Pit	Huron County	Agriculture	3.10	$ 24,375
11-12B	Papple Pit	Huron County	Woodland/ Native Meadow	0.76	$ 3,223
11-13A	Ryan Pit	Huron County	Woodland/ Native Meadow	1.00	$ 11,336
11-13B	Poppe Pit	Huron County	Agriculture	0.90	$ 15,362
				34.40	$ 307,227

* *Total project costs incurred for 2011 were $327004. The difference between the $307,227 shown and the total was monies spent on 13 projects carried over from 2009 and 2010 (mainly seeding and tree planting)*

2011 MAAP

SUMMARY OF MAAP REHABILITATION COSTS

Year	Number of New Sites	Area Rehabilitated (ha)	Total Costs**	Cost / (ha)	Avg Cost per site	Avg Area Rehabilitated (ha)
1992-96*	52	77.99	$726,480	$9,315	$13,971	1.50
1997	15	22.40	$497,973	$22,231	$33,198	1.49
1998	10	18.35	$219,199	$11,945	$21,920	1.84
1999	16	30.45	$366,636	$12,041	$22,915	1.90
2000	17	28.50	$411,226	$14,429	$24,190	1.68
2001	21	25.50	$320,337	$12,562	$15,254	1.21
2002	10	14.25	$288,844	$20,270	$28,884	1.43
2003	19	46.39	$342,897	$7,392	$18,047	2.44
2004	15	27.35	$414,986	$15,173	$27,666	1.82
2005	28	75.45	$498,819	$6,611	$17,815	2.69
2006	28	48.50	$510,556	$10,527	$18,234	1.73
2007	23	39.11	$740,796	$18,941	$32,209	1.70
2008	29	45.10	$480,875	$10,662	$16,582	1.56
2009	19	22.29	$298,699	$13,401	$15,721	1.17
2010	19	21.35	$298,205	$13,967	$15,695	1.12
2011	38	34.40	$240,144	$6,981	$6,320	0.91
Total	359	577.38	$6,656,672	$11,529	$18,542	1.61

** 1992-1996 data is based on information provided by MNR*

*** Total Costs have been restated (except for MNR contracts) to conform with the Trust's revised financial statement presentation*

THE PROCESS OF ACCOMPLISHING!

Multi-step processes leading to singular results most often go unnoticed and unappreciated! Such is the case for rehabilitating legacy pits and quarries. To observe the contractor reshaping a former pit, from a neatly drafted set of working drawings, would only be a partial observation.

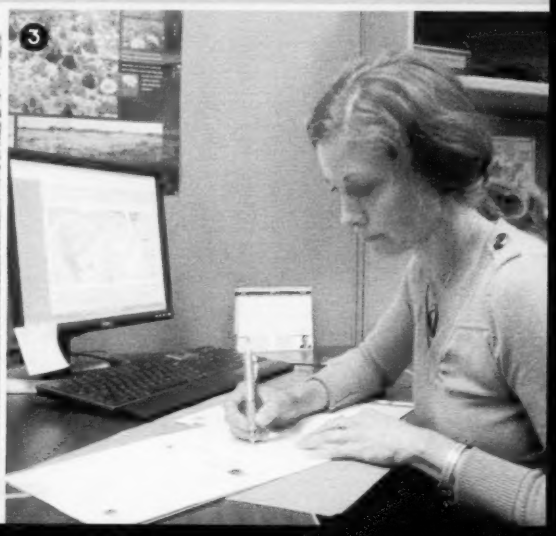
The Management of Abandoned Aggregate Properties (MAAP) program has the task of assessing and rehabilitating (as necessary) over 7,900 sites identified as former pits and quarries (legacy pits & quarries) in areas of the Province designated under the Aggregate Resources Act. The number of files, the extensive geography involved and the reality of limited resources means that rehabilitation efforts must be focussed and deal with sites on a priority basis.

In 2011 MAAP undertook 38 projects (a record number for a single year), which resulted in over 34 hectares of land being rehabilitated! This scale of rehabilitation could not occur without extensive planning from the MAAP team as many of these properties exhibit severely degraded soils (lack of quantity and organics), unique species, steep and eroding slopes, are at various stages of naturalization and require a great deal of landowner, municipal and provincial contact.

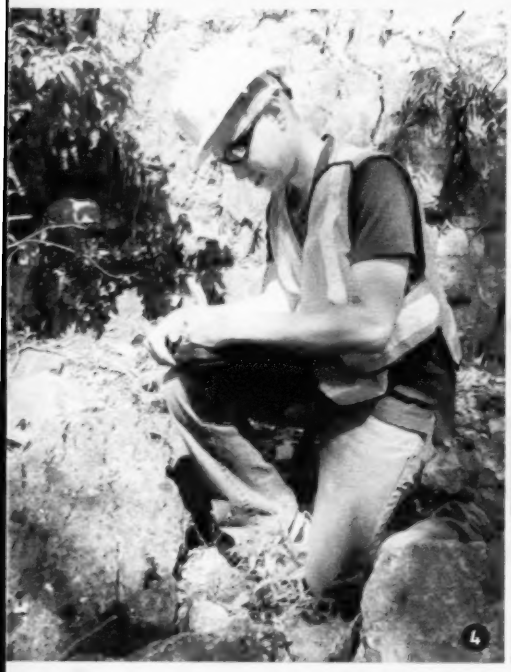
Bringing a project to the construction stage requires a lot of pre-planning , starting with a reliable information base. Under the direction of Danielle Solondz (Project Co-ordinator) and Samantha Brown (Senior Field Technician), field technicians (Tiffany Byrd and Nicholas Mariani) spend the spring and summer months visiting legacy pits and quarries prior to construction. To provide rehabilitation on an equitable basis the MAAP program targets counties and regions on a rotating basis in the spring and fall of each year. Sites in each county are chosen according to priority after a visit by MAAP staff (i.e. a site with steep, unvegetated slopes will take priority over a more level site with no safety concern).

The MAAP database, now known as eMAAP, is continuously updated with the new field data and decisions can now be made regarding the need for rehabilitation intervention based upon the most current information available. The eMAAP digital database incorporates Google Earth locations, historical documents, images, and site information (location, ownership, visit dates, etc.). The document count for each of the 7,900 files averages between 12-20 with 5-10 digital photos that are uploaded and stored on the server. As a result, the creation of eMAAP was an extensive

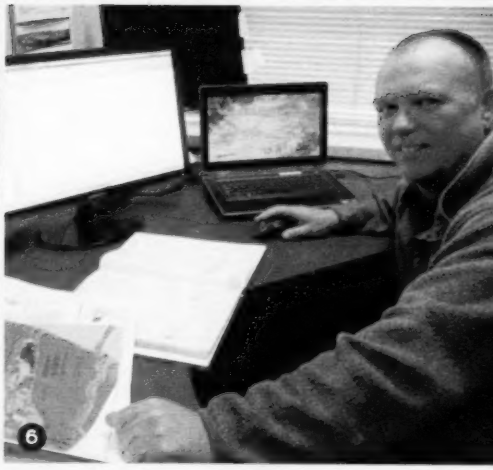
1. Danielle Solondz monitors the rehabilitation of a quarry owned by Halton Conservation.
2. Samantha Brown inventories a site to determine its priority for rehabilitation.
3. Tiffany Byrd uses the Stewardship Tracking System to verify locations of legacy pits and quarries prior to ground verification.



THE PROCESS OF ACCOMPLISHING - *Continued*



4. Nick Mariani inspects a legacy quarry documenting the stages of naturalization to ensure that current habitats will not be altered with rehabilitation.
5. Arifa Ijaz scans one of the 7500 paper files currently housed in the MAAP office.
6. Paul Hartnett, using AutoCad to plot out current conditions and develop rehabilitation plans for the legacy pits and quarries.



process, particularly, the organizing and scanning work undertaken by Arifa Ijaz. eMAAP is currently changing the way that MAAP staff communicates site information, allowing staff to spend more time in the field inventorying properties and working with landowners, rather than commuting to the office to update paper files.

With the passage of time, we are discovering that many sites do not require rehabilitation because they have reverted to other uses or have naturalized on their own. Staff can now focus on those sites that do require rehabilitation and commence the process of landowner and other contacts necessary for the development of working drawings (plans) necessary for construction. The initial contact with landowners can be difficult as many sites do not have homes on the property. As a result, MAAP staff utilizes 'property parcel' software and in many cases works with the municipality to determine ownership. The field technician must obtain landowner consent before the process can proceed further; not all landowners want their former pit or quarry rehabilitated.

Once landowner consent has been received, MAAP's Rehabilitation Supervisor (Paul Hartnett) works directly with the landowners to develop a site plan to accommodate future property goals, (within reason) and to make the restored landscape compatible with surrounding properties.

MAAP staff then consults with various agencies including the local Conservation Authorities, Municipalities and others (i.e. Niagara Escarpment Commission (NEC)) to ensure that the rehabilitation work being proposed conforms to established plans and to obtain clearances or permits as appropriate. Also, with the new Species at Risk Act, MAAP works with biologists to ensure habitats are not altered with the rehabilitation and in many cases are able to create habitat that will encourage species at risk.

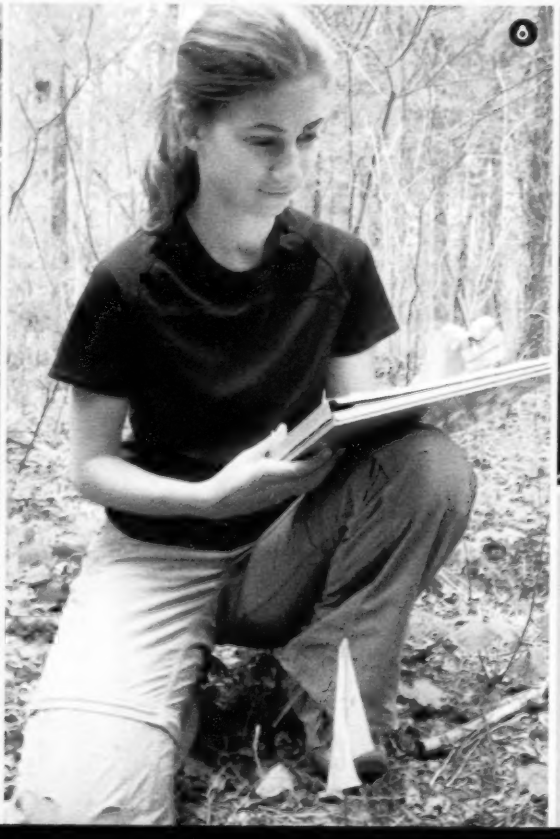
Many legacy sites exhibit difficult conditions; severely degraded soils and/or various stages of naturalization which may not necessarily lead to a good long term result (i.e. if invasive species have populated the site). Consequently, MAAP is always on the lookout for better, more efficient means of rehabilitation. To get better rehabilitation results, MAAP funds an on-going program of various research initiatives. Currently, Dr. Paul Richardson is completing his second year of a post-doctoral study with TOARC. Dr. Richardson and research technician Natalia Leki are

THE PROCESS OF ACCOMPLISHING - *Continued*

assessing the parameters that will improve the rate of afforestation and hopefully help industry to utilize offsets but will also help MAAP staff determine what types of trees to plant to encourage speedy regeneration. PhD candidate Brian Ohsowski is shedding light on the means for establishing tallgrass prairie species on former aggregate sites and in the absence of any topsoil. Brian's work focuses on the use of soil amendments and mycorrhiza to promote re-vegetation. Both of these research projects are described further in this 2011 TOARC Annual Report.

The last stage in the process (following site assessment, landowner contact, agency consultation and plan preparation) is the tendering of the work for construction. Once the site plans are acceptable, the work is publically tendered to both local and Ontario-wide contractors. The work is then monitored by MAAP employees (mostly by Paul Hartnett, Construction Supervisor) to ensure that the projects are completed in a timely manner and according to the design parameters. Construction plans are often accompanied by "planting plans" that are worked out between the landowner and MAAP staff; utilizing knowledge from landowners, research and advice from local nurseries.

Once construction is completed, and the landowners are happy, the MAAP program begins planning the next round of projects!



7. Dr. Paul Richardson conducting field measurements for his afforestation research project.

8. Natalia Lee recording vegetation communities at one of Dr. Richardson's research sites.

9. Brian Ohsowski analyzes the roots for mycorrhiza from plants harvested at his research plots.

RE-VEGETATING POST-MINE SANDPITS: Plant Response to Arbuscular Mycorrhizal Inoculum and Soil Carbon Amendments

RESEARCH TEAM
Brian Ohsowski [1], PhD Student
Dr. John Klironomos [1], Co-Advisor
Dr. Miranda Hart [1], Co-Advisor
Dr. Kari Dunfield [2], Committee Member
Andre Audet [1], Field Assistant

[1] University of British Columbia Okanagan Campus, Kelowna, British Columbia, Canada
[2] University of Guelph, Guelph, Ontario, Canada

TOARC is pleased to update the progress of the tallgrass prairie research project undertaken by Dr. Klironomos, Dr. Miranda Hart, and Brian Ohsowski (PhD Candidate). Habitat destruction and land use change are among the human influences impacting grassland (i.e. prairie) ecosystems. Ontario's highly diverse tallgrass prairies are a threatened habitat-type that only remains as isolated patches. Pre-settlement estimates of Ontario's native tallgrass prairies range from 600 - 2,000 km^2. Currently, southern Ontario's tallgrass prairies occupy less than three percent of this original range. Habitat reduction threatens Ontario's unique prairie inhabitants, elevating the status of many grassland plants and animals to provincially endangered or rare. Depleted aggregate sites are good candidates for prairie restoration projects due to their 'open' nature and adaptability to management scenarios. This potential has been recognized by TOARC and has led to the support of this research initiative. The results of this study can be directly translated into the industrial-scale restoration of native grassland plants in post-mine areas. This research tests the efficacy of novel and easily applicable restoration techniques to facilitate native plant growth and sustainability. Dr. John Klironomos is an established leader in the fields of plant and fungal ecology. Dr. Hart's research focuses on the use of mycorrhizal fungi in degraded ecosystems and plant growth in extreme environmental conditions. Dr. Dunfield's research focuses on understanding the ecology of bacteria and fungi in managed ecosystems.

BACKGROUND

A large-scale experiment (1.2 acres) was established in June 2010 in a post-mine sand pit. The research team is pleased to report that the grassland restoration experiment near St. William's Ontario is in its third year of active research. The research team is testing land management strategies that promote native prairie plant growth in former sand pits. The management tools utilized in this project include the application of arbuscular mycorrhizae (commercially-available) and soil supplements (municipal compost and biochar). These treatments are anticipated to positively alter microbe-driven biogeochemical cycles, soil building processes, and plant mycorrhizal symbioses. It is expected that the combined use of soil amendments and mycorrhizal inoculation will be synergistic with respect to soil development and plant growth.

Synopsis of Amendments

Biochar is created from the high temperature combustion of organic matter (i.e. agricultural wastes, raw materials) in the absence of oxygenated air. Research suggests that biochar positively enhances soil fertility by retaining important soil nutrients, neutralizing acidic soils, increasing water holding capacity, and increasing soil aeration.

Compost is the consequence of the digestion of organic matter (i.e. plant tissue) by bacteria, fungi, and tiny scavengers. Composted organic material has been shown to increase soil fertility by increasing soil organic matter content, providing a source of plant macronutrients (i.e. nitrogen, phosphorus, potassium) and micronutrients (i.e. iron, copper, zinc), increasing water holding capacity of soils, and improving soil aeration.

RE-VEGETATING POST-MINE SANDPITS
Plant Response to Arbuscular Mycorrhizal Inoculum and Soil Carbon Amendments - Continued

Arbuscular mycorrhizal fungi (AMF) are soil microorganisms that form close symbiotic associations with receptive plant root cells. This common symbiotic relationship has been identified in at least 80% of known terrestrial plants. In exchange for photosynthetically produced plant sugars, AMF have been described to benefit plants by increasing phosphorus acquisition, protecting target plants from pathogenic fungi, enhancing seedling performance, and improving plant water relations. In addition, arbuscular mycorrhizae have been shown to directly increase soil aggregation (by growing in and around soil particles), thus reducing erosion and accelerating soil development.

Research Goals:

This research will contribute significantly to the scientific fields of ecological restoration, mycorrhizal ecology, and soil ecology.

Project goals include:

1) describing potential plant-soil-microbe feedbacks;
2) understanding the role of AMF and native plants in the restoration of degraded landscapes;
3) determining the utility and persistence of AMF inoculum in prairie restoration projects;
4) describing the impact of commercial AMF inoculum on existing mycorrhizal communities, and
5) determining soil supplement influence on native prairie plant survival and growth.

The research will answer two practical questions related to industrial scale restoration

1. Does mycorrhizal inoculation (a relatively inexpensive application) positively influence plant establishment, thus adding value to the overall restoration scheme?
2. Does the addition of soil supplements (biochar & compost) in various proportions significantly and cost effectively accelerate soil restoration thus promoting plant persistence?

RESEARCH SITE ESTABLISHMENT

The Nature Conservancy of Canada (NCC) has graciously allowed the use of some of their land holdings near St. Williams, Ontario, for the establishment of the research site. The experimental research site is set-up on a recently active sand pit (established summer 2010). The research team is conducting two field trials at the restoration site: a plant plug experiment and a seed addition experiment. These experiments will test the efficacy of two planting approaches. Both experiments incorporate eight native plant species endemic to Ontario's grasslands, arbuscular mycorrhizal inoculation with *Rhizophagus irregularis*, and varied application rates of biochar / municipal compost treatments in the design.

For specific details regarding the experimental design of the two research projects, please refer to the 2010 TOARC Annual Report found at www.toarc.com.

FIELD SITE UPDATE

The grassland restoration field site has been maintained since the time of initial planting. Several times a year, the inter-plot area is weeded to halt the establishment of belowground common mycorrhizal networks. Without weeding, plots may become cross-contaminated with the added fungal inoculum. To date, the plots have not been disturbed by human interference or animal grazing.

MEASURING PLANT BIOMASS IN THE PLANT PLUG TRIAL (EXPERIMENT #1)

An important aspect of this project is to measure the plant growth associated with each plot. Ideally, plant biomass should be tracked over several years to best understand the plant community growth patterns. To accomplish this task, non-destructive techniques to estimate plant biomass were developed. Three biomass assessment methods were used for Experiment #1: plant survivorship (September 2010/ 2011), primary production estimates via PLSR (described below) (September 2011), and plant cover estimated via photography.

Plant Survivorship

Since the plant plug experiment was spatially mapped, plant plug survivorship can be tracked. A plant was considered to be alive when living green tissue was present at a plug location. Living green tissue was operationally defined as any plant containing foliar material that visibly had chlorophyll, even if the majority of the standing crop is senesced and brown.

RE-VEGETATING POST-MINE SANDPITS
Plant Response to Arbuscular Mycorrhizal Inoculum and Soil Carbon Amendments - Continued

Partial Least Squares Regression (PLSR)
Biomass Estimation

A novel, non-destructive harvesting technique was developed to estimate aboveground plant mass for each plug location in September 2011. A multivariate statistical analysis, partial least squares regression, was used to more accurately predict plant biomass using several biomass predictor variables. The development of this non-destructive technique will allow us to track the growth progress of the plant plugs for the duration this multi-year experiment.

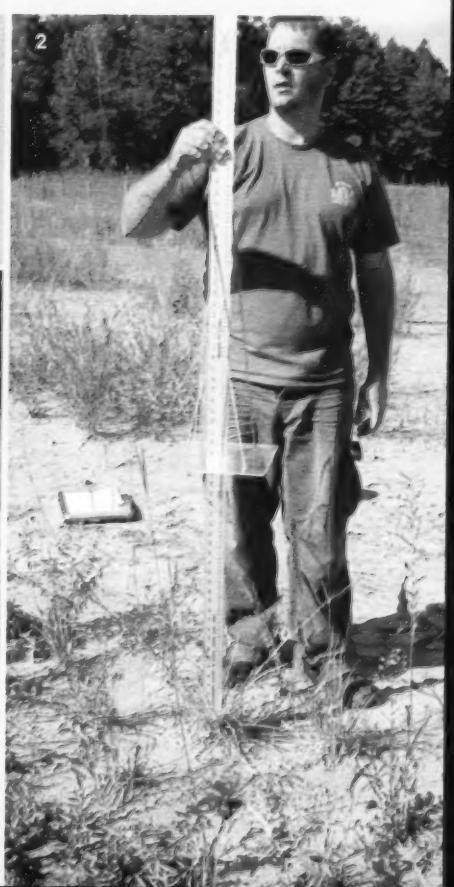
To estimate plant growth, a subset of the plots needed to be destructively harvested to establish a standard curve for predicting biomass. Before destructively harvesting a plant, a suite of measurements potentially useful for predicting plant biomass were taken (See Image 1 and Image 2). Next, plants were clipped above the soil surface, dried, and weighed. Thirty plants per species were measured and harvested to create the standard curve. A Pearson's correlation was conducted to determine which measurements were most highly correlated. The two highest correlated measurements per plant species were used to measure the plants in the remaining plots. Plant biomass was predicted using the established standard curve.

Percent Cover

Plant cover can be used to estimate the growth of the plant community. The research team developed a systematic way to take a photograph above each plot. This simple, non-destructive technique can be used repeatedly throughout the experiment to track plant growth patterns. Percent cover is estimated by determining the number of green pixels in each photograph (See Image 3).

1. Nicola and Jeremy preparing to harvest a plant to establish the standard curve for the estimation of biomass via partial least squares regression.

2. A variety of measurements were used to predict plant biomass. In this photo, Jeremy is displaying our weighted plate apparatus. To measure a plant, the weighted plate is dropped onto a plug of interest. The height of the plate is recorded. Weighted plate measurements strongly correlated with dry plant biomass for the C3 and C4 grasses.



PLANT BIOMASS ANALYSES FOR SEED ADDITION TRIAL (EXPERIMENT #2)

Aboveground biomass and plant diversity estimates will be conducted at the end of the 2012 growing season. Plant diversity indices will be estimated for each plot in Experiment #2. Plant diversity will determine if seed germination rates differ among treatment combinations. To estimate aboveground biomass in Experiment #2, plant harvests will be conducted along a representative transect within each plot. Aboveground biomass will be collected using similar estimation techniques previously outlined for Experiment #1.

COLLECTION OF SOIL CORES

Soil cores containing soil and root material were collected at the time of aboveground plant harvests. Sixteen soil cores were collected from each plot and subsequently pooled. Once pooled, soils were homogenized and roots removed via washing. Roots were chopped to 1cm pieces and frozen at -20°C until DNA analysis or stored in 50% ETOH until AMF Percent colonization analysis. Soil cores were collected from plots in the Fall 2010 / 2011 and shipped to UBC-O until analysis (currently in progress). Soil cores will be used to determine baseline AMF species present in the soil as well as initial chemical and physical soil characteristics.

To test for AMF inocula colonization in the initial greenhouse plugs, ten randomly chosen plugs from each AMF treatment were selected for each plant species grown in the greenhouse (June 2010). Roots were treated in a similar manner as described previously.

DETERMINING AMF PRESENCE AND COMMUNITY COMPOSITION

The following analyses are being conducted to detect AMF presence: 1) percent root colonization, and 2) molecular identification via DNA pyrosequencing and molecular quantification via qPCR.

Root Staining

To determine AMF colonization, stored roots are stained and percent root colonization analyzed via the gridline intercept method. This data will give the researchers an indication of physical inoculum presence in the plant plug roots.

Development of a Molecular Probe for the Mycorrhizal Inoculum

Under a microscope, identifying AMF to the species level is difficult. To overcome this obstacle, the research team is currently developing a molecular probe for the AMF inoculum added to our experiments. Once development is complete, it will be possible to identify and quantify the AMF inoculum via molecular methods.

Assessment of AMF community composition

DNA will be extracted from the soil cores containing the segregated soil and root samples. AMF primers that amplify the total AMF community in the root samples will be used. Downstream molecular applications will be used to indicate fungal identity in the root samples. Furthermore, the molecular probe previously described will be used to specifically quantify the mycorrhizal inoculum in the collected root samples.

These methods will allow the researchers to make comparisons among the experimental plots to test the ramifications of mycorrhizal inoculation and soil supplements on the mycorrhizal community. Resulting information from the belowground community molecular work will be incorporated into the analysis of the aboveground plant growth dynamics.

RESULTS AND DISCUSSION

The results in this section are preliminary. Slight variations in topography were detected at the field site creating a gradient of water availability in the soil. This water gradient will be taken into account during the final statistical analysis. To date, no data is prepared for Experiment #2. All results discussed only apply to Experiment #1.

After one and a half growing seasons, plant plug survivorship is high (See Table). At the time of planting, all plugs were alive. Percent survivorship was nearly 100% for all species except for *L. capitata* and *B. kalmii*. Although plant survivorship was lower than the other six species, plant failure was only 11.9% and 19.2% respectively. More detailed analyses of the plant survivorship data are forthcoming.

RE-VEGETATING POST-MINE SANDPITS

Plant Response to Arbuscular Mycorrhizal Inoculum and Soil Carbon Amendments - Continued

When restoring post-mine sand pits, the plant plug option is more costly than distributing seed. However, if the aggregate site needs to be restored quickly and efficiently, the results of Experiment #1 indicate that sowing native prairie plants plugs is a viable option. The majority of the plants grown from plugs were producing seed after one year of growth. This indicates that our restoration plots should be self-replicating. The use of plant plugs can have dramatic growth results even after only one full growing season (See Image 4).

Although plant survivorship is high across all treatments in Experiment 1, these results do not indicate plant community growth and performance. Preliminary results suggest significant increases in average community total dry weight when compost is incorporated into the soil (control plots: 2067 g ± 98 g SD; 207 t/ha compost: 3498 g ± 90 g SD). Biochar and AMF inoculum addition did not significantly influence plant plug growth after one growing season when compared to control plots. Once the water gradient at the site is incorporated into the analysis, these treatments may have a stronger influence on plant plug growth. These preliminary results suggest that the addition of compost should be an affordable, easy to apply land management tool that improves the performance of plant plugs in post-mine aggregate sites.

		Percent Survivorship	
Species	**Functional Group**	**2010**	**2011**
A. gerardii	C4	99.00%	98.70%
P. virgatum	C4	99.80%	98.50%
E. canadensis	C3	99.70%	99.20%
B. kalmii	C3	96.50%	80.80%
D. canadense	NF	99.70%	99.00%
L. capitata	NF	100.00%	88.10%
S. laeve	CP	99.70%	97.50%
L. cylindracea	CP	99.60%	96.30%

Plant plug survivorship of each plant species in Experiment #1 across all treatments. Data was collected in September 2010 and September 2011. Survivorship data in 2010 represents four months of growth. Survivorship data in 2011 represents one year and 4 months of growth.

3

4

3. An example of an overhead photograph used to measure percent cover. Percent cover will be estimated from the number of green pixels in each photo. In the bottom right corner, Brian Chisulski is holding the apparatus used to take the overhead picture.

4. This is a before and after picture of plant plug growth in one of the plots. The left half of the picture shows plant plugs immediately after sowing. The right half of the picture indicates plant growth after 1 year and 4 months.

ESTABLISHING ALVAR MOSSES ON QUARRY FLOORS

Suzanne Campeau Bryophyta Technologies Inc.

Field work conducted for this research project, which began in spring 2008, was completed in fall 2011. A paper for circulation to licensees and permittees in the aggregate industry which includes a description of how the findings of this research can be utilized by rehabilitation practitioners will be available shortly.

PROJECT RATIONAL AND OBJECTIVES

Alvars are flat, relatively open areas of calcareous bedrock with a sporadic, thin soil cover. Plant communities on these bedrock outcrops are a unique mixture of stunted trees, herbs, forbs, mosses and lichens (Schaefer and Larson, 1997). Despite the low plant biomass, the vascular plant flora of Ontario alvars is highly diverse and contains some unusual, rare and even endangered native species (Catling and Brownell, 1995). The advantages of restoring quarries to alvars would be two-fold. Firstly, rehabilitated quarry floors could become habitat extensions for alvar species. Secondly, the development of a simple but effective method to establish alvar communities on limestone quarries would reduce the need for more costly rehabilitation alternatives, such as the importation and placement of large quantities of topsoil, while still resulting in the restoration of a highly valuable natural habitat.

Surveys conducted on old depleted quarries by University of Guelph researchers showed that quarry floors resemble alvars with respect to many environmental conditions, and that a number of plants characteristic of alvars are also present in old quarries (Tomlinson et al., 2008). Old quarry floors and alvars are therefore sufficiently similar to justify the use of alvars as a restoration target for abandoned quarries. Research funded by TOARC which was conducted by P.J. Richardson (2009) showed that a number of alvar vascular plant species can be established in quarries by seeding and simple soil amendments, which suggests that simple, inexpensive restoration techniques could be developed to speed up the transition from quarry floors to alvars.

Of all the groups of plants – vascular plants, bryophytes and lichens – that are characteristic of alvar vegetation, bryophytes were shown to be the least successful at establishing on their own on abandoned quarry floors (Tomlinson et al., 2008). The overall objective of this project was therefore to determine if and how alvar moss species can be successfully introduced to quarry floors. The goal is to provide recommendations for simple and affordable methods that, in combination with seeding of alvar vascular plants, will promote and accelerate the establishment of functional alvar plant communities on depleted quarry floors.

ESTABLISHING ALVAR MOSSES ON QUARRY FLOORS - Continued

METHODS

Between 2008 and 2010, a series of alvar moss introduction experiments were conducted in four quarries located across southern Ontario. These experiments looked at the effect of mulch, substrate amendments and topography on moss establishment. In order to ensure that the researchers' conclusions could be extrapolated to a variety of sites and field conditions, experiments were replicated among quarries and in different years and seasons. Four species of mosses were used, including one that is present in alvars but is very seldom found in old quarries.

Mosses were collected from old, naturally revegetated quarries or from areas surrounding quarries. They were introduced to the experimental plots at a 1:8 density ratio (surface area of donor plot: surface area of destination plot). Trials were monitored over a one to four year period.

Field experiments were conducted on a small scale due to limitations in source material (propagules, or diaspores, are any portion of a plant (e.g. a seed, a cutting, a gemma, a spore, a fragment, etc.), that can produce a new individual once detached from the parent plant.). Special attention was nonetheless given to large-scale applicability and to compatibility with the methods suggested by Larson et al. (2006) for the establishment of alvar vascular plants in quarries.

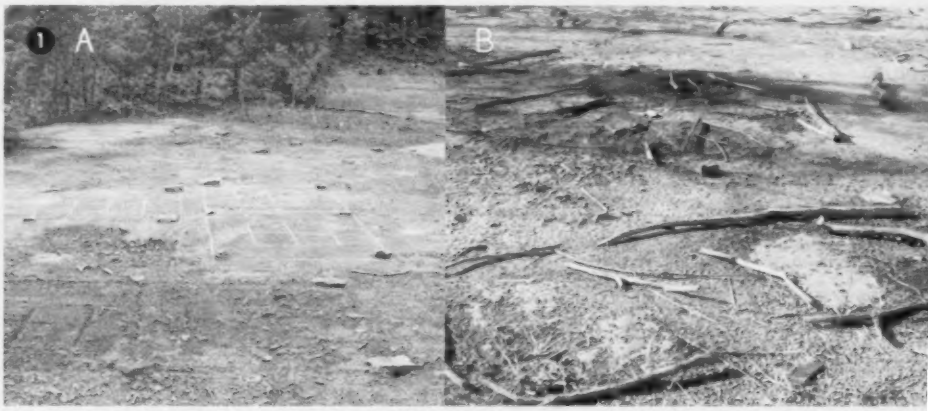
RESULTS

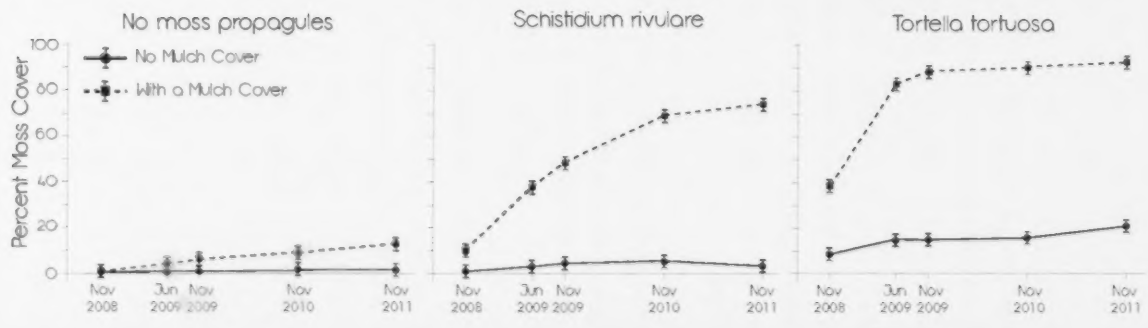
The results of these experiments showed that species of mosses naturally found on alvar limestone pavement can be successfully established on quarry floors starting from propagules (Figure 1). With appropriate mulching and soil amendments (see details below) moss establishment was obtained in all the experiments the researchers conducted and for all species tested, with the exception of those cases where the experimental plots were completely washed out by flooding.

The use of straw mulch greatly improved moss establishment and was a key factor contributing to success at all sites and for most species tested (Figure

1. View of some experimental plots that were part of a trial on the effect of substrate and straw mulch on moss establishment. (A) before the experiment, in June 2008 (B) Some area in November 2010, after three growing seasons, with newly established moss colonies well visible on limestone.

2. Effect of straw mulch and propagule introduction on the establishment and evolution of moss cover on a limestone quarry floor. The experiment was conducted in an old depleted quarry located in Leeds and Grenville County, southeastern Ontario.

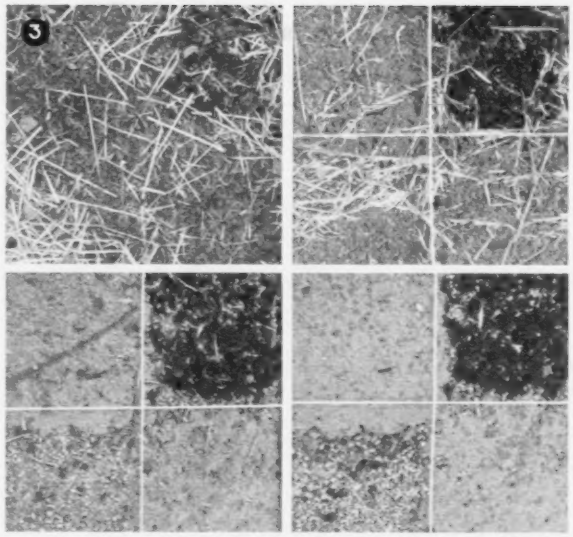




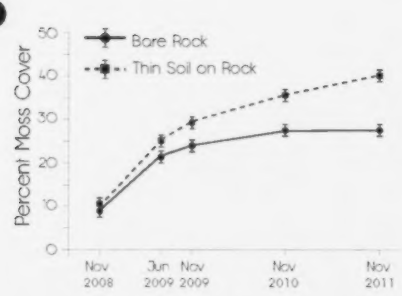
2 and 3). Straw mulch acts in two ways. By retaining moisture and reducing substrate temperature, straw mulch creates a sheltered environment with a microclimate more favorable for the mosses. It also reduces the probability of propagules getting dispersed by water or wind. The latter effect appeared particularly important at one site where the experimental plots were located on a gentle slope.

The experiments also demonstrated that the presence of a thin layer of mineral soil on the bare limestone improved moss establishment, but to a lesser extent than mulch. This was true for plots where the substrate was naturally present (Figure 4) as well as for those where a thin layer of sand or sand and / or organic matter was experimentally added to a bare rock surface. Like mulch, this thin layer of material may act both to retain moisture and to reduce the probability of moss propagules being dispersed by shallow flooding.

Very shallow cracks or small pebbles were also helpful in keeping fragments in place and thus seem to locally help moss establishment (Figure 5). The overall effect, however, was not as important as the effect of adding mulch.



3. Change in moss cover in a plot (50 cm x 50 cm) over the course of the experiment. This plot was on thin soil over rock and was covered with straw mulch at the onset of the experiment. Most of the remaining straw mulch was removed prior to taking pictures, then replaced. The pale green moss is Tortella tortuosa; Schistidium rivulare is a darker green. The lower right quadrat did not receive moss propagules.



4. Effect of substrate type on the establishment of introduced alvar mosses on limestone quarry floor. Same experiment and quarry as in Figure 2.

5. Establishment of moss propagules in limestone depression and cracks (A) or among rock pebbles (B). The experiment was conducted in a depleted quarry located near Haldimand, south-central Ontario.

ESTABLISHING ALVAR MOSSES ON QUARRY FLOORS - Continued

CONCLUSIONS

The project demonstrated that it is possible to establish species of alvar mosses, starting from propagules, for quarry floor restoration purposes. Although further work is clearly needed in order to apply the approach tested here at a larger scale, the project suggests the feasibility of developing revegetation techniques that use alvar mosses and thus add to the biodiversity of plant communities that can be established on depleted quarry floors.

The techniques to use are fairly simple and compare to the techniques developed for peatland restoration (Quinty and Rochefort, 2003; Rochefort et al., 2003). They are also compatible with the methods suggested by Larson et al. (2006) for the establishment of alvar vascular plants in quarries.

In summary, moss propagules (stems, fragments and possibly spores present in this material) - possibly in combination with alvar vascular plant seeds - simply need to be spread on the bare limestone, and then covered with straw mulch. A thin (2 mm or more) layer of sand or sand mixed with organic matter may be spread on the limestone beforehand in order to improve water retention and surface stability. Thin sand amendments were also shown to be beneficial to alvar vascular plant establishment on quarry floors (Larson et al., 2006).

Substrate heterogeneity, in the form of shallow cracks, areas with broken up limestone rocks (pebbles) or areas with thicker sand and soil, may add to the stability and diversity of the final plant assemblage. Special attention needs to be paid to mitigating the effects of flooding during heavy rain and snow melt. This could be done, for example, by including a lower area where excess water can pool or to plan for a water outlet when possible.

The availability of moss propagules in quantities sufficient to allow for the rehabilitation of alvar moss communities on large quarry floors is an issue. Obviously, mosses could not be harvested on alvars or from well vegetated old quarries, due to the paucity and ecological values of these sites. Therefore, restoration would need to rely on nursery-grown mosses or on mosses harvested from semi-managed quarries where propagules would be sown, propagated and then harvested at a few year intervals.

AFFORESTATION RESEARCH PROJECT

Determining the timespan and ecological conditions necessary for afforestated environments to support older-growth understory communities.

Dr. Paul Richardson, Research Fellow with TOARC, and Dr. Stephan Murphy from the Centre for Ecosystem Resilience and Adaptation, University of Waterloo began work in 2011 to setup a wide-reaching ecological study. The study aimed to yield crucial information about the timespan and ecological conditions necessary for afforested environments to support biodiversity associated with southern Ontario's heritage deciduous forests. This work seeks to address key unanswered questions facing land managers and ecologists alike.

The research set out to answer a few key questions:

1. Can conifer plantation forests develop an ecological resemblance to older-growth natural forests over the course of a century?
2. How many decades are required, and what factors may accelerate or inhibit the average timeline?
3. Does planting hardwoods alongside conifers, or minimizing the rate or intensity of tree harvesting, promote development of conditions favourable to diverse herb communities typically found below natural forest canopies?
4. Is the pace of such development limited by soil differences between plantations and natural forests, and if so are the key differences related to biotic or abiotic components of the soil?

In the past year a lot of work by the research team has gone to establishing a large pool of study sites varying in multiple aspects of forest management, installing an herb-relocation experiment and an ecological comparison study at a subset of these sites. Partnerships with regional conservation authorities, municipal foresters, the Ontario Ministry of Natural Resources have been essential for gaining site access and records. With the foundations of the study now firmly laid, the research team can be confident that the multiple layers of ecological data which are currently being collected – soil properties; canopy composition; stand density; understory composition and diversity; survival and growth of native understory species relocated from natural to plantation forests – will yield patterns that are relevant to determining the influence of different management strategies on the degree and rate at which similarities between natural and plantation forests emerge.

Over the first six months of the study the researchers gathered records and visited more than 300 forest sites, including natural forests and plantations ranging widely in time since planting, species planted, degree of tree thinning

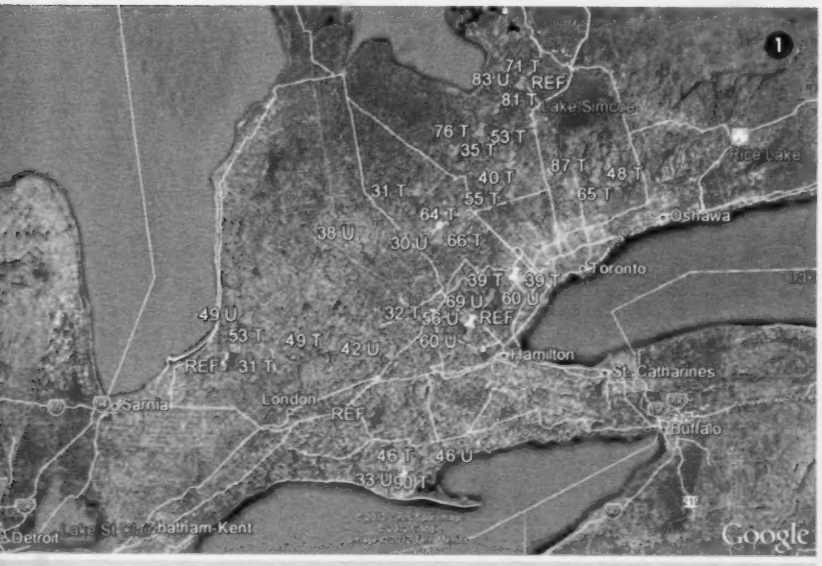
AFFORESTATION RESEARCH PROJECT - Continued

previously imposed, and geographical location. The team established the largest feasible spatial scale for the investigation in order to maximize the study's scope of inference, with forest sites spanning ~200 km gradients in both latitude and longitude. The researchers filtered this initial pool of sites for eligibility to include in the experimental study, based largely on capacity to access sites and accurately classify them with respect to the factors of interest (e.g. age, tree species planted, etc.). This resulted in a pool of 123 eligible sites which were categorized into finite age and management classes. Sites were chosen at random from each group, yielding 7 reference natural forests and 35 plantations. Plantations consistently spanned age gradients within each of the following groups:

1. Regularly thinned conifer monoculture (red pine or white pine);
2. Never-thinned or "under-thinned" conifer monoculture;
3. Thinned conifer mixture (red and white pine intermixed, or mixed with species such as white spruce or tamarack);
4. Under-thinned conifer mixture;
5. Thinned mixture of conifers and hardwood species (e.g. white ash, black walnut);
6. Under-thinned mixture of conifers and hardwoods.

The conifer plantations span an age gradient of ~30-90 years since planting, while the conifer-hardwood mixed plantations span a gradient of ~30-60 years since planting (Figure 1).

Two herbaceous understory species were settled upon for use in the herb-relocation experiment based on consultations with partners as well as site visits and evidence for abundant populations in reference sites. Both wild leek (*Allium tricoccum*) and wild ginger (*Asarum canadense*) met the criteria for use as an effective ecological indicator, with broad population distributions across the study area, but relative confinement to older-growth deciduous forests within the area (suggesting environmental specialization). Moreover, though, as *Allium* overwinters as a bulb and *Asarum* as a rhizome (Figure 2), both species are relatively easy to transplant safely, allowing for a fair test of impacts of the new environment on plant survival, rather than impacts of the transplantation process itself. Approximately 1500 bulbs or rhizomes of each species were thus collected from reference forests last autumn and relocated immediately to experimental plots within the plantation sites, as well as to new locations within the reference forest (i.e. in order to help calculate the background level of mortality due to transplantation that would be expected even if the



1. Map of 42 forest sites included in the herb-relocation and ecological comparison study. Blue markers indicate reference forests (REF); orange markers indicate conifer-only plantations; yellow markers indicate conifer-hardwood mixed plantations. Numbers in plantation labels indicate the number of years since the site was planted while each letter codes for whether the site was regularly thinned (T) or under-thinned (U). Note that some separate points cannot be distinguished at the scale shown.

AFFORESTATION RESEARCH PROJECT - Continued

environment remained constant). Thirty small plots were established at random locations within each of the 42 sites, with each plot receiving one leek bulb and one ginger rhizome (Figure 3). Ten plots per site received the plant material but no other alterations; however ten plots received plants and ~ 1 L of soil from the plants' home environment alongside the plants themselves, while the remaining ten plots received plants and home soil that had been autoclaved prior to relocation. Comparison of transplant performance among these three treatments will help determine how transplants are limited by soil properties in their new environments, including the relative importance of biotic versus abiotic components of the soil. Comparisons among sites will shed important light on potential relationships between management strategies and the nature of such limitations on understory communities.

While the research team is presently at just the outset of data collection, all sites were visited earlier this spring for the purposes of GPS mapping site perimeters and maintaining plot tags. It quickly became clear during these visits that the wild leeks had overwintered successfully and were emerging from dormancy in multiple plots at most sites. Relocated wild ginger has to date been considerably less abundant than wild leek, though it is too early to draw conclusions.

Collection of transplant performance data is presently underway, and surveys will be repeated at least four times throughout the field season; different types of additional data to be collected during each round of the monitoring (e.g. understory composition; canopy properties; soil properties). Data will be suitable for analyses by mid-autumn, enabling conclusions and recommendations to be made by the end of April 2013.

2. Wild leek (*Allium tricoccum*) bulb (bottom) and wild ginger (*Asarum canadense*) rhizome (top) prior to transplanting.

3. Dr. Paul Richardson conducting an herb-relocation experiment at a pine plantation using a wild leek bulb and wild ginger rhizome.

PRODUCTION REPORTING - AUDIT PROGRAM

TOARC, on behalf of the Trust, initiated an audit program in 2000 to monitor the completeness and accuracy of production reports submitted by licensees and permittees. The program is designed to educate licence and permit holders with respect to their obligations for record keeping under the Aggregate Resources Act in addition to assuring that aggregate production is being reported properly.

Since the inception of the program, TOARC has audited 510 clients covering 1649 licences and permits resulting in an additional $616,116 of net aggregate resource fees collected.

REVOKED LICENCES AND PERMITS

Under Subsection (v) (i) of the Trust Indenture, TOARC has the responsibility for "the rehabilitation of land for which a Licence or Permit has been revoked and for which final rehabilitation has not been completed". Since inception of the Trust, 84 licences and 109 permits have been revoked. In the case of licences, 61 have been rehabilitated or the files have been closed for other reasons. In the case of permits, 104 have been rehabilitated or closed for other reasons. To date the Trust has expended $660,770 in net direct costs for rehabilitation of revoked sites.

INDEPENDENT AUDITOR'S REPORT

To the Trustee of Aggregate Resources Trust:

We have audited the accompanying financial statements of Aggregate Resources Trust (the "Trust"), which comprise the statement of financial position as at December 31, 2011, and the statements of revenues and expenses and changes in fund balances, and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian generally accepted accounting principles, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Trust's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Trust's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of the Trust as at December 31, 2011 and the results of its operations and its cash flows for the year then ended in accordance with Canadian generally accepted accounting principles.

BDO CANADA LLP

Chartered Accountants, Licensed Public Accountants

February 22, 2012
Burlington, Ontario

AGGREGATE RESOURCES TRUST

Statement of Financial Position

As at December 31	2011 $	2010 $
ASSETS		
Current		
Cash	**1,121,564**	610,726
Short-term investments	**265,556**	333,442
Due from Licensees and Permittees	**161,365**	199,244
HST recoverable	**39,813**	38,555
Interest and dividends declared receivable	**31,274**	35,610
Prepaid expenses	**15,833**	17,851
Total current assets	**1,635,405**	1,235,428
Investments *[note 3]*	**15,770,303**	16,299,413
Capital assets, net *[note 4]*	**121,655**	96,379
	17,527,363	17,631,220
LIABILITIES AND TRUST FUNDS		
Current		
Accounts payable and accrued liabilities	**181,449**	120,945
Due to the Ontario Stone, Sand & Gravel Association *[note 1], [note 5]*	**54,555**	11,091
Wayside permit deposits	**21,880**	67,880
Deferred Aggregate Resources Charges	**41,780**	56,391
Deferred lease costs	**23,306**	31,781
Due to Governments	**644,919**	285,490
Total current liabilities	**967,889**	573,578
Trust Funds		
Rehabilitation Fund	**13,837,603**	14,084,899
Abandoned Pits and Quarries Rehabilitation Fund	**2,721,871**	2,972,743
Total Trust Funds	**16,559,474**	17,057,642
	17,527,363	17,631,220

See accompanying notes

On behalf of the Trust by The Ontario Aggregate Resources Corporation as Trustee:

Director

Director

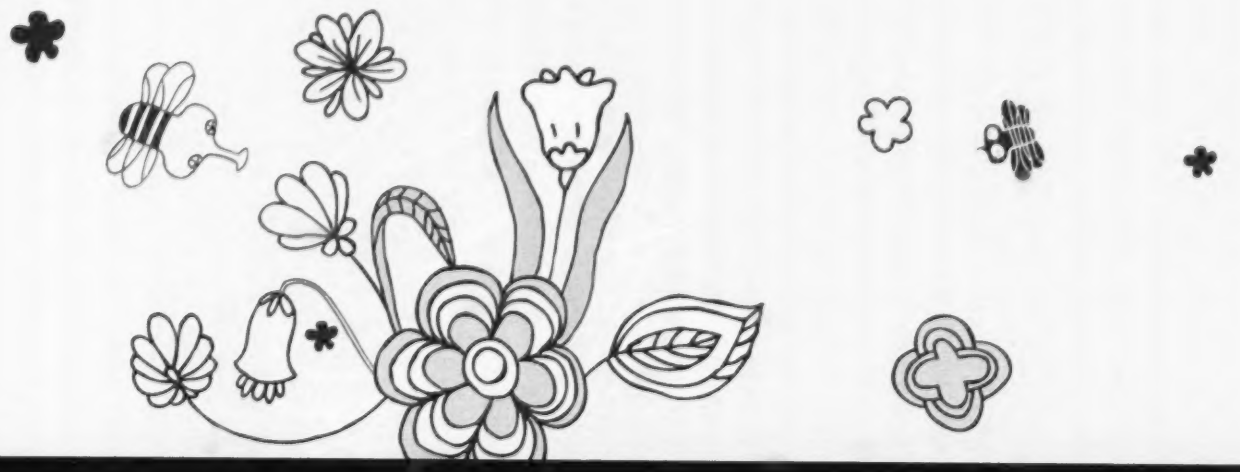
AGGREGATE RESOURCES TRUST

Statement of Revenue and Expenses and Changes in Fund Balances

For the Year ended December 31 — 2011

	Aggregate Resources Fund $	Rehabilitation Fund $	Abandoned Pits and Quarries Rehabilitation Fund $	Total $
REVENUE				
Investment income *[note 3]*	–	907,557	155,798	1,063,355
Unrealized changes in fair value	–	(500,053)	(117,577)	(617,630)
Publications	–	203	1,335	1,538
Gain on disposal of capital assets	–	300	–	300
	–	408,007	39,556	447,563
EXPENSES				
Trustee's expenses *[note 8]*	–	441,632	538,384	980,016
Depreciation	–	21,047	25,233	46,280
Investment management fees	–	102,390	21,927	124,317
	–	565,069	585,544	1,150,613
Deficiency of revenue over expenses before the following	–	(157,062)	(545,988)	(703,050)
Aggregate Resources Charges	20,465,003	–	–	20,465,003
Allocated to the Governments	(19,682,102)	–	–	(19,682,102)
Allocated to the Crown	(782,901)	–	–	(782,901)
Deficiency of revenue over expenses for the year	–	(157,062)	(545,988)	(703,050)
Trust Funds, beginning of year	–	14,084,899	2,972,743	17,057,642
Funds reinvested by the Crown	782,901	–	–	782,901
Interfund transfer	(782,901)	–	782,901	–
Expenditures incurred in meeting the Trust purposes *[see schedules]*	–	(90,234)	(487,785)	(578,019)
Trust Funds, end of year	–	13,837,603	2,721,871	16,559,474

See accompanying notes



AGGREGATE RESOURCES TRUST

Statement of Revenue and Expenses and Changes in Fund Balances

For the Year ended December 31	2010			
	Aggregate Resources Fund $	Rehabilitation Fund $	Abandoned Pits and Quarries Rehabilitation Fund $	Total $
REVENUE				
Investment income *[note 3]*	–	616,370	115,761	732,131
Unrealized changes in fair value	–	676,889	147,681	824,570
Publications	–	300	1,620	1,920
Gain on disposal of capital assets	–	–	7,500	7,500
	–	1,293,559	272,562	1,566,121
EXPENSES				
Trustee's expenses *[note 6]*	–	543,598	560,820	1,104,418
Depreciation	–	23,612	16,934	40,546
Investment management fees	–	99,264	21,656	120,920
	–	666,474	599,410	1,265,884
Excess (deficiency) of revenue over expenses before the following	–	627,085	(326,848)	300,237
Aggregate Resources Charges	18,477,313	–	–	18,477,313
Allocated to the Governments	(17,756,807)	–	–	(17,756,807)
Allocated to the Crown	(720,506)	–	–	(720,506)
Excess (deficiency) of revenue over expenses for the year	–	627,085	(326,848)	300,237
Trust Funds, beginning of year	–	13,462,145	2,943,262	16,405,407
Funds reinvested by the Crown	726,956	–	–	726,956
Interfund transfer	(726,956)	6,450	720,506	–
Expenditures incurred in meeting the Trust purposes *[see schedules]*	–	(10,781)	(364,177)	(374,958)
Trust Funds, end of year	–	14,084,899	2,972,743	17,057,642

See accompanying notes

AGGREGATE RESOURCES TRUST

Statement of Cash Flows

For the Year ended December 31	2011 $	2010 $
CASH FLOWS FROM OPERATING ACTIVITIES		
Excess (deficiency) of revenue over expenses for the year	**(703,050)**	300,237
(Add) less items not involving cash		
Depreciation	**46,280**	40,546
Unrealized changes in fair values	**617,630**	(824,570)
Gain on disposal of capital assets	**(300)**	(7,500)
	(39,440)	(491,287)
Net change in non-cash working capital balances related to operations		
Due from Licensees and Permittees	**37,879**	(14,177)
HST recoverable	**(1,258)**	(18,066)
Interest and dividends declared receivable	**4,336**	13,438
Prepaid expenses	**2,018**	16,546
Accounts payable and accrued liabilities	**60,504**	(98,047)
Due to Licensees and Permittees	**–**	(6,693)
Due to Ontario Stone, Sand & Gravel Association	**43,464**	10,956
Wayside permit deposits	**(46,000)**	(23,715)
Deferred Aggregate Resources Charges	**(14,611)**	24,917
Deferred lease costs	**(8,475)**	(8,475)
Due to Governments	**359,429**	(248)
Cash provided by (used in) operating activities	**397,846**	(594,851)
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of capital assets	**(71,556)**	(37,459)
Proceeds on disposal of capital assets	**300**	7,500
Purchase of short-term investments	**(20,268,282)**	(36,030,772)
Sale of short-term investments	**20,335,803**	36,449,804
Purchase of investments	**(4,857,267)**	(1,852,924)
Sale of investments	**4,769,112**	1,749,737
Cash provided by (used in) investing activities	**(91,890)**	285,886
CASH FLOWS FROM FINANCING ACTIVITIES		
Funds reinvested by the Crown	**782,901**	726,956
Expenditures incurred in meeting the Trust purposes	**(578,019)**	(374,958)
Cash provided by financing activities	**204,882**	351,998
Net increase in cash during the year	**510,838**	43,033
Cash, beginning of year	**610,726**	567,693
Cash, end of year	**1,121,564**	610,726

Supplemental Cash Flow Information

For the Year ended December 31	2011 $	2010 $
Cash received from interest	443,901	434,556

See accompanying notes

AGGREGATE RESOURCES TRUST

Schedules of Rehabilitation Costs for the Rehabilitation Fund

For the Year ended December 31 — 2011

Project number	Project name	Paid or Payable $
11-02	Douglas Pit, Renfrew County	**65,485**
	Education	
	Rehabilitation Manual	**7,419**
	Student Rehabilitation Design Competition	**10,257**
	Rehabilitation Tour Kitchener-Waterloo & surrounding area	**1,000**
	Tendering, consulting and other	**6,073**
		90,234

See accompanying notes

For the Year ended December 31 — 2010

Project number	Project name	Paid or Payable $
	Education	
	Rehabilitation Manual	**270**
	Student Rehabilitation Design Competition	**9,511**
	Rehabilitation Tour Brampton & surrounding area	**1,000**
		10,781

See accompanying notes

AGGREGATE RESOURCES TRUST

Schedule of Rehabilitation Costs for the Abandoned Pits and Quarries Rehabilitation Fund

For the Year ended December 31 **2011**

Project number	Project name	Paid or Payable/ (Recovered) $
09-11	Smith (Hunter) Pit, Wellington County	**619**
09-15	Kroes Pit, Perth County	**4,356**
10-01	Sullivan Pit, Peterborough County	**370**
10-02	Buck Pit, City of Kawartha Lakes	**7,925**
10-03A	Barrett Pit, City of Kawartha Lakes	**62**
10-03B	Keenan Pit, City of Kawartha Lakes	**62**
10-04	McQuaid Pit, City of Kawartha Lakes	**62**
10-05	Cook Pit, City of Kawartha Lakes	**62**
10-06	Carroll Pit, City of Kawartha Lakes	**678**
10-07	Carnaghan Pit, City of Kawartha Lakes	**370**
10-09	Hoddenbagh Pit, City of Kawartha Lakes	**2,156**
10-10	Dancey Pit, City of Kawartha Lakes	**616**
10-15	Dow Pit, Perth County	**2,200**
10-17A	Ackerblade Pit, Haliburton County	**16,930**
10-17B	Ackerblade Pit, Haliburton County	**7,347**
10-18	Park-Kent Pit, Haliburton County	**3,582**
10-19	Boice Pit, Haliburton County	**239**
10-20A	Smith Pit, Haliburton County	**8,945**
10-20B	Smith Pit, Haliburton County	**2,197**
10-22	Beahre Pit, Haliburton County	**16,063**
10-23	Ewaschuk Pit, Haliburton County	**6,852**
10-25	Thomas Pit, Haliburton County	**5,168**
11-01A	Swain Pit, Haliburton County	**479**
11-01B	Mulroy Pit, Haliburton County	**958**
11-01C	Bolton Pit, Haliburton County	**958**
11-01D	Wilson Pit, Haliburton County	**958**
11-01E	Thomas-Medhurst Pit, Haliburton County	**718**
11-02	Walter Pit, Peterborough County	**2,296**
11-03	Kentelbey Pit, Dufferin County	**3,373**
11-04	Bakker Pit, Dufferin County	**1,960**
11-05A	Skjonsky Pit, Dufferin County	**8,112**
11-05B	Alexander Pit, Dufferin County	**11,553**
11-05C	Corlett Pit, Dufferin County	**9,113**
11-06A	Milley Pit, Dufferin County	**10,000**
11-06B	Lindrop Pit, Dufferin County	**10,627**
11-06C	Rutledge Pit, Dufferin County	**21,938**
11-07A	Halbert Pit, Dufferin County	**17,900**
11-07B	McAuslane Pit, Dufferin County	**13,058**
11-07C	Fernandes Pit, Dufferin County	**18,605**
11-07D	Rhodes Pit, Dufferin County	**6,616**
11-08	Myles Pit, Bruce County	**2,175**
11-09	Molto Pit, Huron County	**8,813**
11-10A	Thompson Pit, Huron County	**4,678**

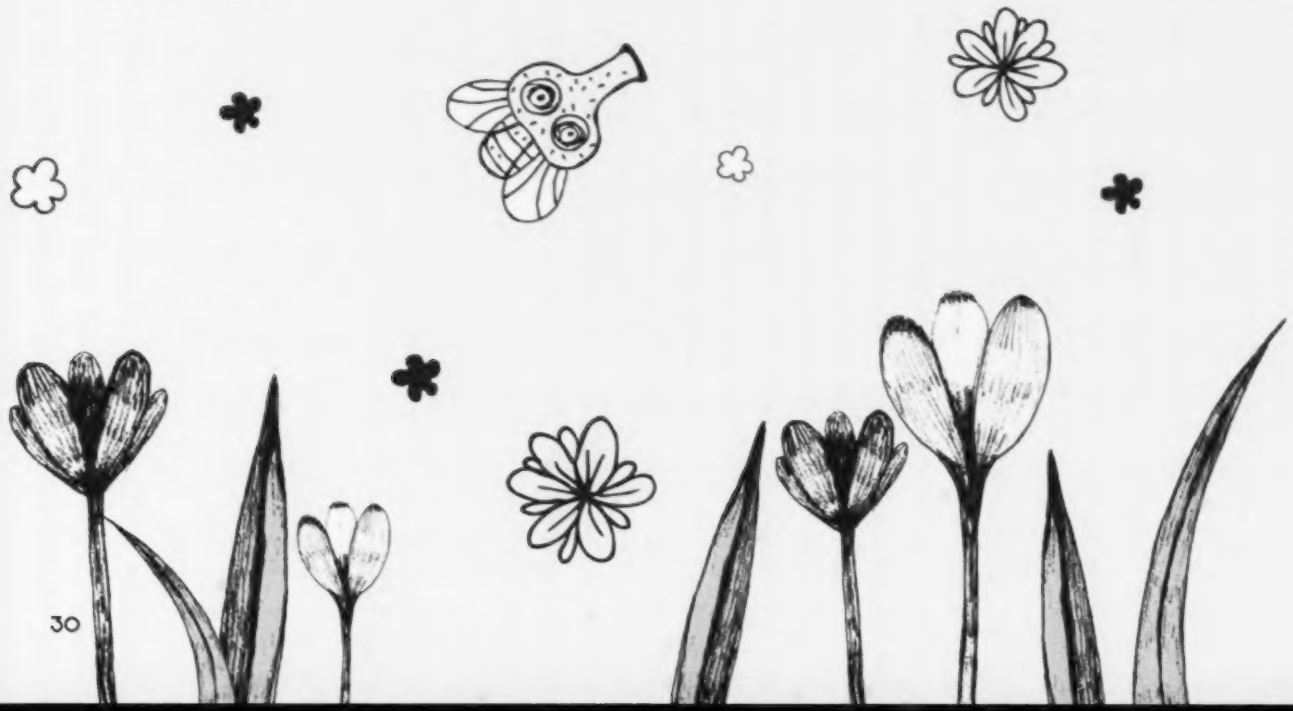
AGGREGATE RESOURCES TRUST

Schedule of Rehabilitation Costs for the Abandoned Pits and Quarries Rehabilitation Fund - *Continued*

For the Year ended December 31 — 2011

Project number	Project name	Paid or Payable/ (Recovered) $
11-10B	Scott Pit, Huron County	**4,488**
11-10C	Siertsema Pit, Huron County	**4,650**
11-10D	Lapp Pit, Huron County	**6,840**
11-11A	Shetler Pit, Huron County	**12,788**
11-11B	Hallman Pit, Huron County	**2,193**
11-12A	Murray Pit, Huron County	**24,375**
11-12B	Papple Pit, Huron County	**3,223**
11-13A	Ryan Pit, Huron County	**11,336**
11-13B	Poppe Pit, Huron County	**15,362**
	Research costs	
	Dr. Klironomos - Fungal & Soil Ecology - Native prairie plant response to mycorrhizal inoculation and soil carbon amendments	**14,000**
	Dr. Richardson - Determining the time span and ecological conditions necessary for afforested environments to support older-growth understory communities	**66,209**
	Recoveries NSERC & Centre for Ecosystem Resilience & Adaptation	**(20,645)**
	Deloitte & Touche LLP - Ontario Aggregate Forum	**99,790**
	Tendering, consulting and other	**1,427**
		487,785

See accompanying notes



AGGREGATE RESOURCES TRUST

Schedule of Rehabilitation Costs for the Abandoned Pits and Quarries Rehabilitation Fund

For the Year ended December 31 — 2010

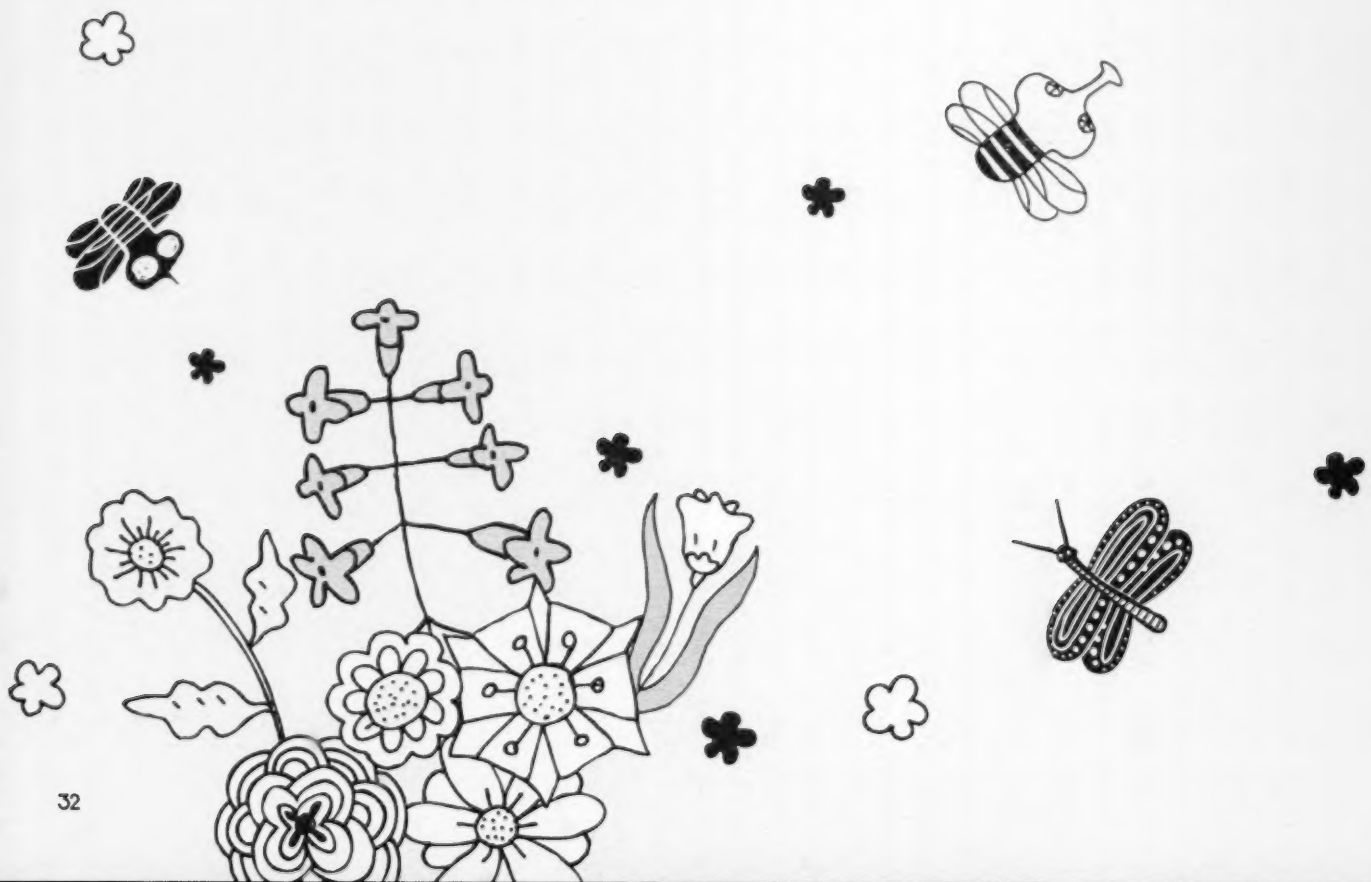
Project number	Project name	Paid or Payable/ (Recovered) $
06-15	Clark Pit, Dufferin County	2,950
07-17	Morrison Pit, Grey County	1,752
07-18	Fogels Pit, Grey County	856
08-02	Sallans Pit, Peterborough County	107
08-24	Maree Pit, Grey County	91
08-26	Brindley Pit, Bruce County	(750)
09-01	Birch Pit, Huron County	2,573
09-04	Powell Pit, Huron County	462
09-05	Mahon Pit, Perth County	1,914
09-06	Mount Pit, Huron County	493
09-11	Smith (Hunter) Pit, Wellington County	18,730
09-13	Poel Pit, Middlesex County	116
09-15	Kroes Pit, Perth County	5,975
09-16	Kruger Pit, Renfrew County	2,491
09-17	Galbraith Pit, Renfrew County	2,636
09-19	Graham Pit, Lanark County	3,350
09-21	Martin Pit, Lanark County	1,779
10-01	Sullivan Pit, Peterborough County	10,703
10-02	Buck Pit, City of Kawartha Lakes	12,073
10-03A	Barrett Pit, City of Kawartha Lakes	8,971
10-03B	Keenan Pit, City of Kawartha Lakes	8,971
10-04	McQuaid Pit, City of Kawartha Lakes	2,448
10-05	Cook Pit, City of Kawartha Lakes	5,214
10-06	Carroll Pit, City of Kawartha Lakes	9,417
10-07	Carnaghan Pit, City of Kawartha Lakes	3,394
10-08	Johnston Pit, City of Kawartha Lakes	69,131
10-09	Hoddenbagh Pit, City of Kawartha Lakes	6,047
10-10	Dancey Pit, City of Kawartha Lakes	6,836
10-11	Soenen Pit, Norfolk County	13,100
10-12	Sheele Pit, Elgin County	11,450
10-13	McRae Pit, District of Muskoka	4,800
10-14	Bradford Pit, Haliburton County	2,403
10-15	Dow Pit, Perth County	32,490
10-16	Sisson Pit, Haliburton County	2,332
10-19	Boice Pit, Haliburton County	3,000
10-24	Montgomery Pit, Haliburton County	3,540

AGGREGATE RESOURCES TRUST

Schedule of Rehabilitation Costs for the Abandoned Pits and Quarries Rehabilitation Fund - *Continued*

For the Year ended December 31		2010
Project number	**Project name**	**Paid or Payable/ (Recovered)** $
	Newly Designated Areas - Inventories report	**39,929**
	Research costs	
	Bryophyta Technologies - Establishing Alvar mosses on Quarry floors	**7,708**
	Savanta Inc. - Pilot Tallgrass Prairie Restoration Plan	**25,638**
	Pilot Tallgrass Prairie Restoration Plan Recoveries (MNR)	**(15,179)**
	Dr. Klironomos - Fungal & Soil Ecology - Native prairie plant response to mycorrhizal inoculation and soil carbon amendments	**27,000**
	Dr. Richardson - Determining the time span and ecological conditions necessary for afforested environments to support older-growth understory communities	**10,000**
	Tendering, consulting and other	**7,236**
		364,177

See accompanying notes



AGGREGATE RESOURCES TRUST

Notes to Financial Statements - December 31, 2011

1. FORMATION AND NATURE OF TRUST

Aggregate Resources Trust [the "Trust"] was settled by Her Majesty the Queen in Right of the Province of Ontario [the "Crown"] as represented by the Minister of Natural Resources [the "Minister"] for the Province of Ontario pursuant to Section 6.1(1) of the Aggregate Resources Act, R.S.O. 1990, Chap. A.8 as amended [the "Act"]. The Minister entered into a Trust Indenture dated June 27, 1997 [the "Trust Indenture"] with The Ontario Aggregate Resources Corporation ["TOARC"] appointing TOARC as Trustee of the Trust.

The Trust's goals are: [a] the rehabilitation of land for which a Licence or Permit has been revoked and for which final rehabilitation has not been completed; [b] the rehabilitation of abandoned pits and quarries, including surveys and studies respecting their location and condition; [c] research on aggregate resource management, including rehabilitation; [d] making payments to the Crown and to regional municipalities, counties and local municipalities in accordance with regulations made pursuant to the Act; [e] the management of the Abandoned Pits and Quarries Rehabilitation Fund; and [f] such other purposes as may be provided for by or pursuant to Section 6.1(2)5 of the Act.

In 1999 the Trust's purposes were expanded by amendment to the Trust Indenture to include:

[a] "the education and training of persons engaged in or interested in the management of the aggregate resources of Ontario, the operation of pits or quarries, or the rehabilitation of land from which aggregate has been excavated; and

[b] the gathering, publishing and dissemination of information relating to the management of the aggregate resources of Ontario, the control and regulation of aggregate operations and the rehabilitation of land from which aggregate has been excavated."

In accordance with the Trust Indenture, TOARC administers the Trust which consists of three funds: the Aggregate Resources Fund, the Rehabilitation Fund and the Abandoned Pits and Quarries Rehabilitation Fund. TOARC is a mere custodian of the assets of the Trust and all expenditures made by TOARC are expenditures of the Trust.

Prior to the creation of the Trust, the Trust's goals were pursued by the Minister and, separately, the Ontario Stone, Sand & Gravel Association [the "OSSGA"] formerly The Aggregate Producers' Association of Ontario [the "APAO"]. Upon the creation of the Trust, rehabilitation security deposits held by the Crown, as represented by the Minister, were to be transferred to the Trust. In addition, the Crown directed the OSSGA to transfer, on behalf of the Crown, the Abandoned Pits and Quarries Rehabilitation Fund to the Trust. By December 31, 1999, the Minister and the OSSGA had transferred $59,793,446 and $933,405, respectively, to the Trust.

Pursuant to the Trust Indenture, TOARC "shall pay and discharge expenses properly incurred by it in carrying out and fulfilling the Trust purpoes and the administration of the Trust . . ." [Section 7.02].

The Aggregate Resources Fund is for the collection of the annual licence and permit fees, royalties, and wayside permit fees [aggregate resources charges] collected on behalf of the Minister. Effective for the 2007 production year the annual licence fee increased from $0.06 per tonne to $0.115 per tonne. The licence fees are due by March 15 of the following year, and are disbursed within six months of receipt. The fees are disbursed as follows: [a] $0.06 to the lower tier municipality, [b] $0.015 to the upper tier municipality, [c] $0.035 to the Crown, collectively [the "Governments"] and [d] $0.005 to the Trust. Minimum annual fees were increased effective for the 2007 production year:

- a Class A licence from $200 to $400 or $0.115 per tonne whichever is greater;
- a Class B licence from $100 to $200 or $0.115 per tonne whichever is greater;
- the minimum wayside fee from $100 to $400 or $0.115 per tonne whichever is greater;
- the annual aggregate permit fee from $100 to $200;
  and
- the minimum royalty rate for aggregate extracted on Crown land from $0.25 to $0.50 per tonne.

For production prior to 2007 all aggregate resources charges remain at the old fee schedule with the $0.06

licence fee being disbursed as follows: [a] $0.04 to the lower tier municipality, [b] $0.005 to the upper tier municipality, [c] $0.01 to the Crown, collectively [the "Governments"] and [d] $0.005 to the Trust.

The funds reinvested by the Crown to the Trust from the Aggregate Resources Fund will be transferred within the Trust and used for the Rehabilitation Fund and the Abandoned Pits and Quarries Rehabilitation Fund. In addition, the Trust collects the royalty payments and annual fees related to aggregate permits and also disburses the funds to the Crown within six months of receipt.

The Rehabilitation Fund represents the rehabilitation security deposits, contributed by Licensees and Permittees, held by the Crown and, in accordance with the Trust Indenture, transferred to the Trust. TOARC has been directed by the Minister to refund approximately 3,000 individual licensee and permittee accounts based on the formula of retaining $500 per hectare disbursed on licenses and 20% of the deposit amount for aggregate permits. As a result, the Trust has refunded approximately $4.06 million as per the Crown's directions. The balance of funds will be used to ensure the rehabilitation of land where licenses and/or permits have been revoked and final rehabilitation has not been completed.

The Abandoned Pits and Quarries Rehabilitation Fund is for the rehabilitation of abandoned sites and related research. Abandoned sites are pits and quarries for which a licence or permit was never in force at any time after December 31, 1989.

The Trust's expenses [or Trustee's expenses] are the amounts paid pursuant to Article 7.02 of the Trust Indenture.

Pursuant to Section 4.01 of the Trust Indenture, the Trust's assets and the income and gains derived therefrom are property belonging to the Province of Ontario within the meaning of Section 125 of the Constitution Act, 1867 and, by reason of Section 7.01 of the Trust Indenture, the amounts paid by the Trustee pursuant to Article 7 are paid to or for the benefit of the Crown.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The financial statements of the Trust have been prepared in accordance with Canadian generally accepted accounting principles and within the framework of the significant accounting policies summarized as follows:

Use of Estimates

The preparation of financial statements in accordance with Canadian generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from management's best estimates as additional information becomes available in the future. The financial statements have, in management's opinion, been properly prepared using careful judgment within reasonable limits of materiality and within the framework of the accounting policies of the Trust.

Aggregate Resources Charges

Aggregate resources charges collected on behalf of the Minister are recorded upon receipt of a tonnage report from Licensees and Permittees. Aggregate resources charges are based on the tonnage produced in the preceding period by the Licensees and Permittees as reported by the Licensees and Permittees. If there is no production in the preceding period, an annual fee is recognized for Permittees.

Deferred Aggregate Resources Charges represents prepayments and overpayments of fees charged to Licensees and Permittees.

Capital Assets

Capital assets are recorded at cost less accumulated depreciation. Depreciation is recorded to write off the cost of capital assets over their estimated useful lives on a straight-line basis as follows:

Computer equipment and software	3 to 5 years
Furniture and fixtures	5 years
Leasehold improvements	5 years
Vehicles	3 years

Deferred Lease Costs

Deferred lease costs represent leasehold improvements that are being reimbursed by the landlord and are being amortized over the term of the lease.

Financial Instruments

Financial instruments are initially measured at fair value. Those classified as loans and receivables or other liabilities are subsequently measured at amortized cost using the effective interest rate method. The Trust does not classify any of its financial assets as held-to-maturity or available-for-sale.

The Trust has classified its financial instruments as follows:

Cash is designated as held-for-trading.

Short-term investments are classified as held-for-trading and are considered highly liquid investments maturing

within 12 months of the financial statement date. The carrying values of short -term investments are a reasonable estimate of their fair value due to their short-term maturity. The fair value of these assets is based on quoted market prices.

Short-term investments consist of:

i) A Province of Quebec promissory note that bears interest at 0.90% per annum with a maturity date of January 19, 2012.
ii) A Province of Ontario T-Bill that bears interest at 0.90% per annum with a maturity date of January 25, 2012.
iii) An Enbridge Pipelines bond that bears interest at 4.46% per annum with a maturity date of December 17, 2012.

Investments are classified as held-for-trading. Realized gains and losses and unrealized changes in fair values are recorded in the Statement of Revenue and Expenses and Changes in Fund Balances under investment income and unrealized changes in fair value respectively. Fair value is determined based on quoted market prices.

The Trust accounts for its investments on a trade date basis and transaction costs associated with the investments are included in the Statement of Revenue and Expenses and Changes in Fund Balances under investment income.

Due from Licensees and Permittees and interest and dividends declared receivable are classified as loans and receivables and are measured at amortized cost.

Accounts payable and accrued liabilities, due to Licensees and Permittees, wayside permit deposits and due to Governments are classified as other financial liabilities and are measured at amortized cost.

The Trust utilizes various financial instruments. Unless otherwise noted, it is management's opinion the Trust is not exposed to significant interest, currency or credit risks arising from its financial instruments and the carrying amounts approximate fair values.

Revenue Recognition
Investment income is recognized in the period in which it is earned.

Foreign Currency Translation
Foreign currency accounts are translated into Canadian dollars as follows:

Foreign currency assets and liabilities are translated into Canadian dollars by the use of the exchange rate prevailing at the year end date for monetary items and at exchange rates prevailing at the transaction date for non-monetary items. The resulting foreign exchange gains and losses are included in investment income in the current period.

3. INVESTMENTS

Investments consist of the following:

	2011		2010	
	Fair Value $	**Cost $**	**Fair Value $**	**Cost $**
Bonds				
Government of Canada and Agencies	**2,469,205**	**2,308,901**	3,389,657	3,247,727
Corporate	**459,051**	**432,773**	459,648	436,604
Convertible Debenture	**1,836**	**2,116**	3,586	2,116
Canadian Equities	**1,351,885**	**1,194,200**	1,179,176	776,013
Foreign Equities	**3,587,281**	**4,563,474**	3,433,735	4,288,763
Pooled Funds	**7,901,045**	**7,564,406**	7,833,611	7,226,492
	15,770,303	**16,065,870**	16,299,413	15,977,715

The Government of Canada and Agencies bonds bear interest at rates ranging from 1.36% to 7.75% per annum [2010 - 1.02% to 9.95%] with maturity dates ranging from June 1, 2013 to December 15, 2025.

The Corporate bonds bear interest at rates ranging from 4.30% to 6.65% per annum [2010 - 4.30% to 6.50%] with maturity dates ranging from April 1, 2013 to November 16, 2020.

Interest rate risk
The Trust is exposed to interest rate risk on its bond portfolio and does not currently hold any financial instruments that mitigate this risk. Management does not believe that the impact of interest rate fluctuation will be significant.

Investment income is broken down as follows:	2011 $	2010 $
Interest income	**436,852**	421,254
Dividends	**270,034**	212,520
Realized capital gains *[net]*	**358,452**	97,987
Foreign exchange losses *[net]*	**(2,023)**	(1,339)
Other income	**40**	1,709
	1,063,355	732,131

Investment income of the Rehabilitation Fund includes interest earned on Aggregate Resources Charges collected on behalf of the Minister of $140,209 [2010 - $82,413].

4. CAPITAL ASSETS

Capital assets consist of the following:	2011			2010		
	Cost $	Accumulated depreciation $	Net book value $	Cost $	Accumulated depreciation $	Net book value $
Computer equipment and software	**219,887**	**160,957**	**58,930**	163,128	142,276	20,852
Furniture and fixtures	**119,750**	**98,630**	**21,120**	122,126	108,949	13,177
Leasehold improvements	**46,700**	**24,103**	**22,597**	46,700	14,763	31,937
Vehicles	**81,770**	**62,762**	**19,008**	81,770	51,357	30,413
	468,107	**346,452**	**121,655**	413,724	317,345	96,379

5. DUE TO THE ONTARIO STONE, SAND & GRAVEL ASSOCIATION
Amounts due to the Association are unsecured, non-interest bearing and are due on demand.

6. COMMITMENTS
The Trust has entered into a number of Research Funding Agreements. The future annual payments, in total and over the next three years, are as follows:

	$
2012	**62,230**
2013	**69,186**
2014	**15,000**
	146,416

7. CAPITAL DISCLOSURES
The Trust considers its capital to be its trust funds invested in the Aggregate Resources Fund, the Rehabilitation Fund and the Abandoned Pits and Quarries Rehabilitation Fund. The Trust's objective when managing its capital is to safeguard its ability to continue as a going concern so that it can fulfill the Trust's purposes. Annual budgets are developed and monitored to ensure that the Trust's capital is maintained at an appropriate level.

8. TRUSTEE'S EXPENSES

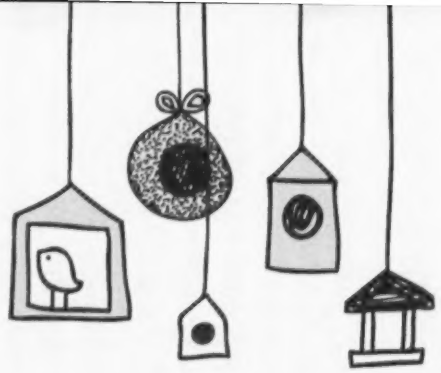
For the Year ended December 31	2011		
	Rehabilitation Fund $	Abandoned Pits and Quarries Rehabilitation Fund $	Total $
EXPENSES			
Salaries and employee benefits	266,467	409,777	676,244
Board expenses	4,999	4,998	9,997
Professional fees	58,054	20,854	78,908
Data processing	8,998	7,024	16,022
Travel	24,362	41,755	66,117
Communication	22,804	23,143	45,947
Office	13,784	6,861	20,645
Office lease, taxes and maintenance	37,725	21,752	59,477
Insurance	4,439	2,220	6,659
Trustee Expenses	441,632	538,384	980,016

For the Year ended December 31	2010		
	Rehabilitation Fund $	Abandoned Pits and Quarries Rehabilitation Fund $	Total $
EXPENSES			
Salaries and employee benefits	322,616	391,712	714,328
Board expenses	3,864	3,864	7,728
Professional fees	102,736	39,309	142,045
Data processing	15,126	19,730	34,856
Travel	20,845	52,102	72,947
Communication	20,769	21,427	42,196
Office	16,106	9,133	25,239
Office lease, taxes and maintenance	37,124	21,337	58,461
Insurance	4,412	2,206	6,618
Trustee Expenses	543,598	560,820	1,104,418

9. LEASE COMMITMENTS

The future minimum annual lease payments are as follows:

	$
2012	70,585
2013	71,640
2014	53,730
	195,955



INDEPENDENT AUDITOR'S REPORT

To the Shareholder of The Ontario Aggregate Resources Corporation:

We have audited the accompanying financial statements of The Ontario Aggregate Resources Corporation (the "Corporation"), which comprise the balance sheets as at December 31, 2011, December 31, 2010 and January 1, 2010, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian accounting standards for private enterprises, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Corporation's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Corporation's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained in our audits is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of The Ontario Aggregate Resources Corporation as at December 31, 2011, December 31, 2010 and January 1, 2010, in accordance with Canadian accounting standards for private enterprises.

BDO CANADA LLP

Chartered Accountants, Licensed Public Accountants

February 22, 2012
Burlington, Ontario

THE ONTARIO AGGREGATE RESOURCES CORPORATION

Balance Sheet

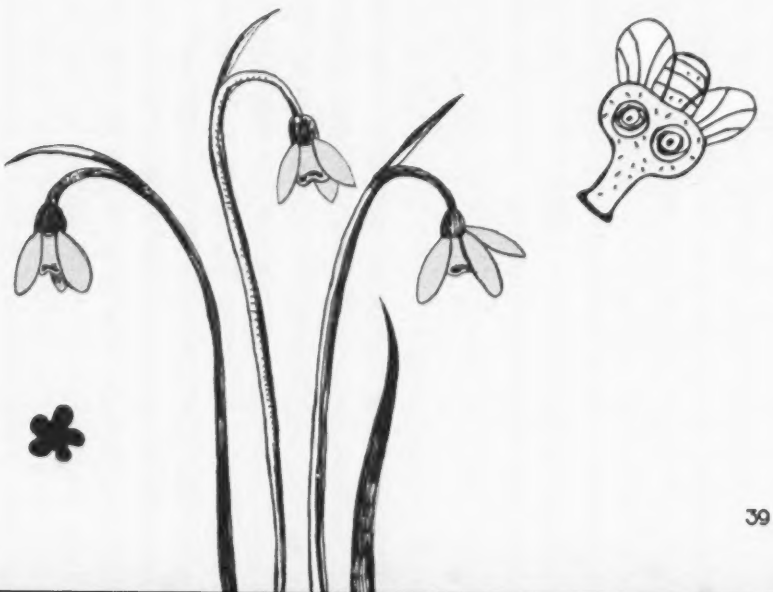
	Dec. 31 2011 $	Dec. 31 2010 $	Jan. 1 2010 $
ASSET			
Cash	1	1	1
SHAREHOLDER'S EQUITY			
Share capital			
Authorized and issued, 1 common share	1	1	1
Retained earnings	-	-	-
Total shareholder's equity	1	1	1

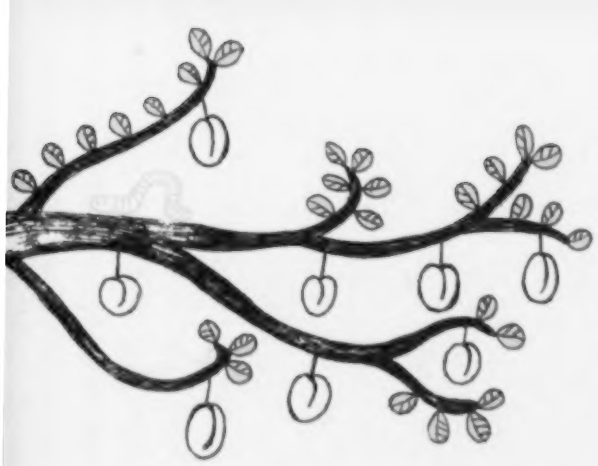
See accompanying notes

On behalf of the Board:

Director

Director





THE ONTARIO AGGREGATE RESOURCES CORPORATION

Notes to Financial Statements - December 31, 2011 and 2010

1. FORMATION AND NATURE OF OPERATIONS

The Ontario Aggregate Resources Corporation [the "Corporation"] was incorporated on February 20, 1997. The Corporation's sole shareholder is the Ontario Stone, Sand & Gravel Association [the "OSSGA"] [formerly The Aggregate Producers' Association of Ontario [the "APAO"]], a not-for-profit organization. The Corporation's sole purpose is to act as Trustee of the Aggregate Resources Trust [the "Trust"]. On June 27, 1997, the Corporation and Her Majesty the Queen in Right of the Province of Ontario [the "Crown"], as represented by the Minister of Natural Resources [the "Minister"], entered into a Trust Indenture, appointing the Corporation as Trustee of the Trust.

In accordance with the Indenture Agreement, the Corporation manages the administrative expenses as Trustee of the Trust which consists of three funds: the Aggregate Resources Fund, the Rehabilitation Fund and the Abandoned Pits and Quarries Rehabilitation Fund.

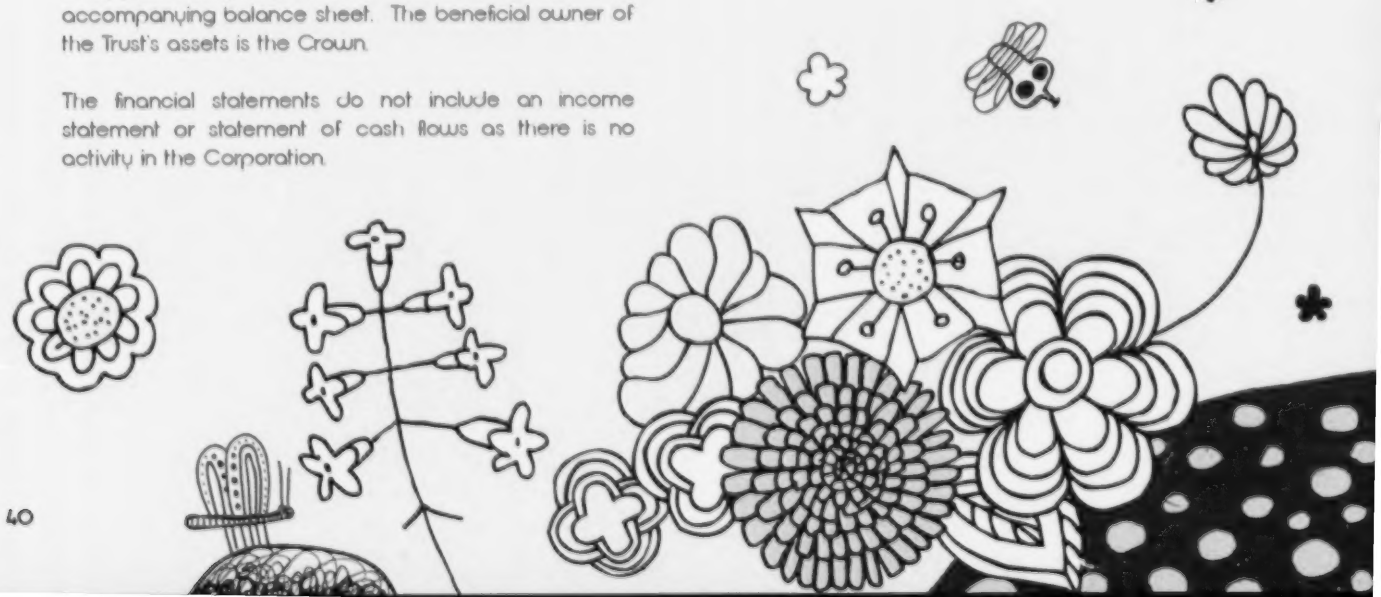
The Trust's assets managed by the Corporation, amounting to approximately $166 million, are not included in the accompanying balance sheet. The beneficial owner of the Trust's assets is the Crown.

The financial statements do not include an income statement or statement of cash flows as there is no activity in the Corporation.

2. FIRST TIME ADOPTION

Effective January 1, 2011, the Corporation adopted the requirements of the new accounting framework, Canadian accounting standards for private enterprises [ASPE] or Part II of the requirements of the Canadian Institute of Chartered Accountants [CICA] Handbook - Accounting. These are the Corporation's first financial statements prepared in accordance with this framework and the transitional provisions of Section 1500, First-time Adoption have been applied. Section 1500 requires retrospective application of the accounting standards with certain elective exemptions and retrospective exceptions.

The Corporation issued financial statements for the year ended December 31, 2010 using generally accepted accounting principles prescribed by the CICA Handbook - Accounting Part V - Pre-changeover Accounting Standards. The adoption of ASPE resulted in no adjustments to the previously reported assets and shareholder's equity of the Corporation.



Professional Assistance

Banking Institution

Scotiabank*

Investment Advisors

TE Investment Counsel Inc.

Investment Managers

Burgundy Asset Management Ltd.

Letko Brosseau & Associates Inc.

Auditors

BDO Canada LLP

Legal Counsel

Blake, Cassels & Graydon LLP

Shareholder

Ontario Stone, Sand & Gravel Association

toarc.com